Report of Findings and First Half 2005 Groundwater Monitoring Report

PALCO Company Garage
Scotia, California
Case No. 12272

Prepared for:

PALCO

Consulting Engineers & Geologists, Inc.
812 W. Wabash
Eureka, CA 95501-2138
707 / 441-8855

May 2005
089097.120

Reference: 089097.120

May 31, 2005

Ms. Leanne Schroyer
Humboldt County Division of Environmental Health
100 H Street, Suite 100
Eureka, CA 95501

Subject: Report of Findings and First Half 2005 Groundwater Monitoring Report
PALCO Company Garage, Scotia, California; Case No. 12272

Dear Ms. Schroyer:

This report is presented by SHN Consulting Engineers & Geologists, Inc. (SHN), on behalf and with the approval of PALCO, and includes the results of additional groundwater monitoring well installation and groundwater monitoring activities conducted at the PALCO Company Garage Underground Storage Tank investigation, for the reporting period March 2004 to March 2005.

Please don't hesitate to contact me if you have any questions.

Sincerely,

SHN Consulting Engineers & Geologists, Inc.

Martin E. Lay, P.E.
Project Manager

MEL/RMR:lms
Enclosure: Report
copy w/encl: Robert Vogt, PALCO
Kasey Ashley, RWQCB, North Coast Region

Reference: 089097.120

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QA / QC: MEL___

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Abbreviations and Acronyms

<	denotes a value that is "less than" the method detection limit.
mg/L	milligrams per Liter
mV	millivolts
ppm	parts per million
ug/g	micrograms per gram
ug/L	micrograms per Liter
ug/ml	micrograms per milliliter
Ag	Silver
AP	Assessor's Parcel Number
As	Arsenic
ASTM	American Standard Test Method
Ba	Barium
Be	Beryllium
BTEX	Benzene, Toluene, Ethylbenzene, and total Xylenes
Cd	Cadmium
Co	Cobalt
COD	Chemical Oxygen Demand
Cr	Chromium
Cu	Copper
DCO_2	Dissolved Carbon Dioxide
DIPE	Diisopropyl Ether
DO	Dissolved Oxygen
DOT	Department of Transportation
EC	Electrical Conductivity
EPA	United States Environmental Protection Agency
ETBE	Ethyl Tertiary-Butyl Ether
Fe	Iron
HB&M	Humboldt Base and Meridian
HCDEH	Humboldt County Division of Environmental Health
Hg	Mercury
Mn	Manganese
Mo	Molybdenum
MSL	Mean Sea Level
MTBE	Methyl Tertiary-Butyl Ether
MW-#	Monitoring Well-#
NA	Not Analyzed
NAVD88	North American Vertical Datum 1988
Ni	Nickel
ORP	Oxidation-Reduction Potential
Pb	Lead
PVC	Polyvinyl Chloride
RAP	Remedial Action Plan
RAWP	Remedial Action Work Plan
ROWD	Report of Waste Discharge
RWQCB	California Regional Water Quality Control Board, North Coast Region

Abbreviations and Acronyms, Continued

S-#	UST-#
Sb	Antimony
Se	Selenium
SHN	SHN Consulting Engineers & Geologists, Inc.
TAME	Tertiary-Amyl Methyl Ether
TBA	Tertiary-Butyl Alcohol
TDS	Total Dissolved Solids
Tl	Thallium
TPHD	Total Petroleum Hydrocarbons as Diesel
TPHG	Total Petroleum Hydrocarbons as Gasoline
TPHMO	Total Petroleum Hydrocarbons as Motor Oil
USCS	Unified Soil Classification System
USTs	Underground Storage Tanks
V	Vanadium
VOCs	Volatile Organic Compounds
Zn	Zinc

1.0 Introduction

SHN Consulting Engineers & Geologists, Inc. (SHN) was retained by PALCO to conduct an additional subsurface investigation at the PALCO Company Garage in Scotia, California. This report describes the field activities for the monitoring well installation and subsequent groundwater monitoring and sampling at the site. This work was requested by the Humboldt County Division of Environmental Health (HCDEH) and the California Regional Water Quality Control Board, North Coast Region (RWQCB). This report is the culmination of the work described and agreed upon by representatives of SHN, the HCDEH, and the RWQCB.

The information in this report is presented in 6 sections. This section serves as an introduction and describes the site history and conditions, and discusses the objectives of the investigation. Section 2.0 describes the field program for the monitoring well installation, well development, and sampling. Section 3.0 describes the results of the soil sampling. Section 4.0 presents the results of the groundwater monitoring, and Section 5.0 presents a discussion of the findings and provides recommendations. Section 6.0 lists cited references.

1.1 Vicinity Information

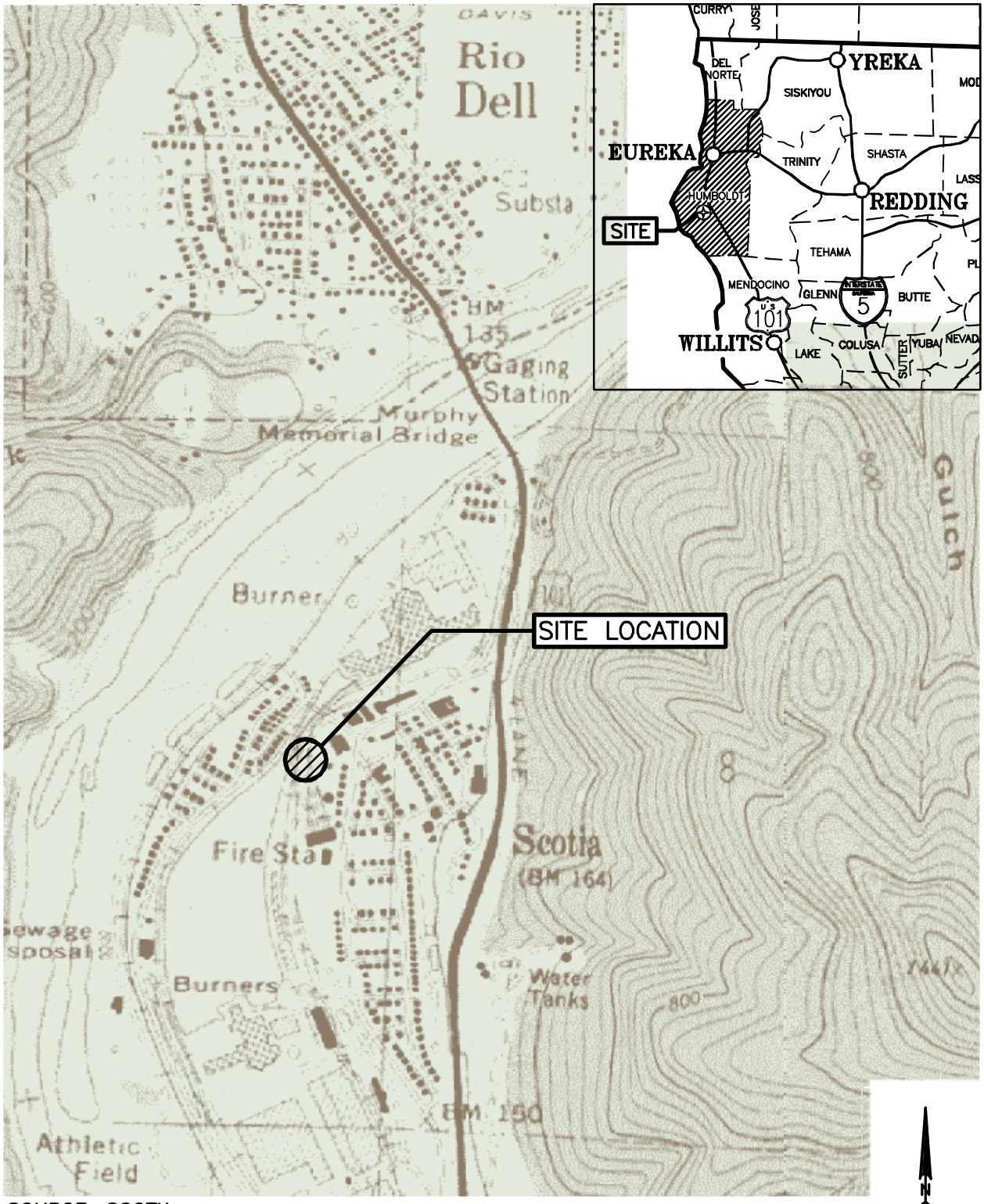
The PALCO Company Garage site is located at the northeastern corner of the intersection of Main and Bridge Streets, in the town of Scotia, Humboldt County, California (Assessor's Parcel Number [APN] 205-351-16). The Company Garage (Case No. 12272) and former Service Station (Ademar's Chevron, Case No. 12273) are part of the same facility. The entire site lies within the northeast ¼ of Section 7, Township 1 North, Range 1 East, Humboldt Base and Meridian (HB&M) (Figure 1).

1.2 Site History

The existing Company Garage building was historically utilized for vehicle and equipment service and repair. Five Underground Storage Tanks (USTs) were formerly located at the facility (Figure 2). A 12,000-gallon unleaded gasoline UST (S-5) was installed in 1974; a 1,500-gallon diesel UST (S-6) and a 1,000-gallon leaded gasoline UST (S-15) were installed in 1959; a 1,000-gallon premium unleaded gasoline UST (S-14) was installed in 1972; and, a 1,000-gallon unleaded gasoline UST (S-16) was installed at the facility in 1975.

On June 6, 1991, the 1,000-gallon leaded gasoline UST (S-14) was removed under permit from the southeast corner of the Company Garage site. On July 27, 1998, SHN and the HCDEH observed the removal of the remaining USTs (S-5, S-6, S-15, and S-16). Minimal over-excavation of soil was completed in the northernmost tank pit, which previously contained the 12,000-gallon UST (S-5). Over-excavation of contaminated soil from around the southern-most tank pits was also conducted. The tank pit locations were subsequently backfilled, and the surface was paved with asphalt concrete as directed by PALCO. Approximately 120 cubic yards of excavated soil were temporarily stockpiled on site, under permit, and in November 1999, were transported under manifest to Ben's Truck and Equipment Incorporated, located in Red Bluff, California, for disposal by bioremediation.

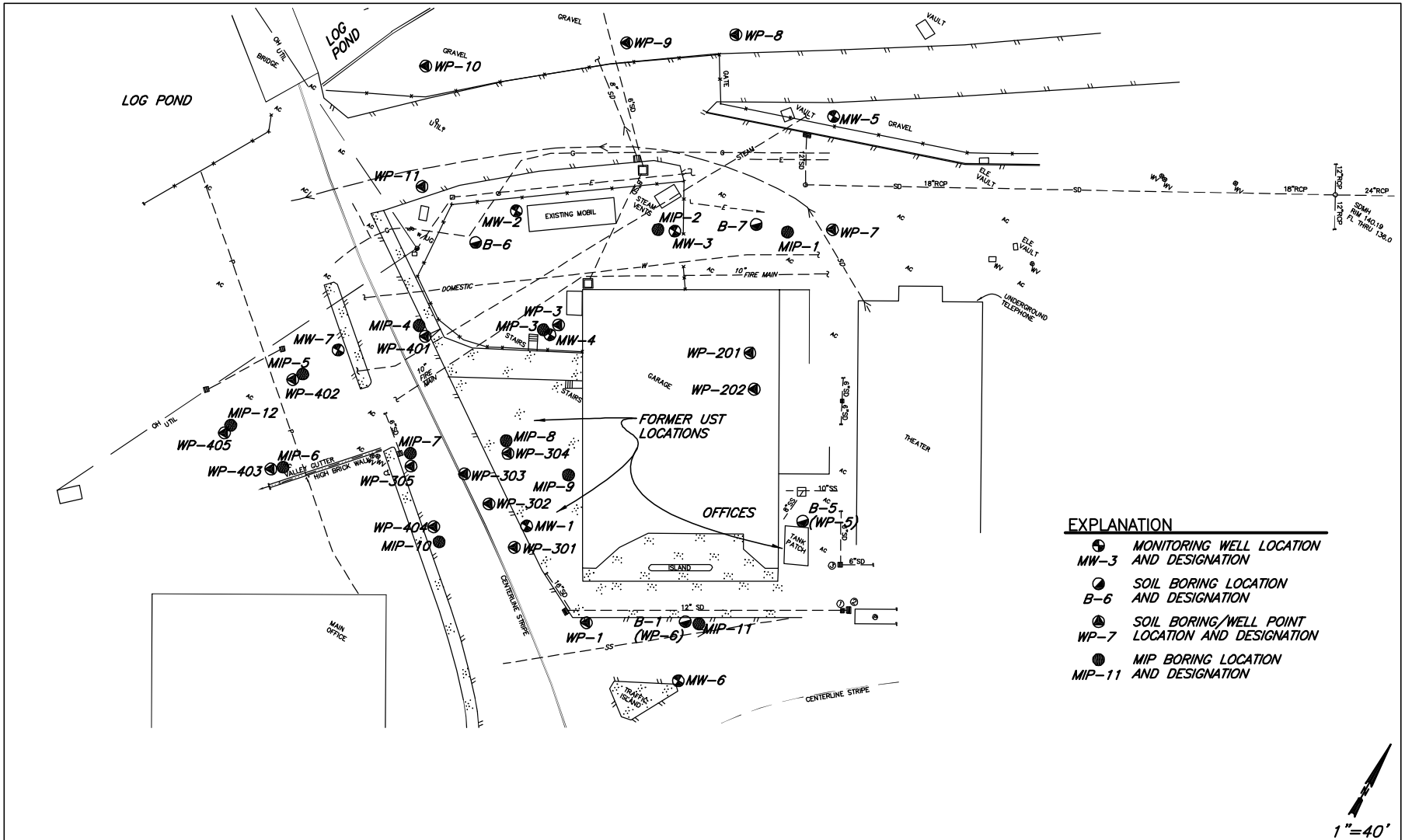
SHN conducted an initial subsurface soil and groundwater investigation at the Company Garage site in December 1999, which included the advancement of 12 exploratory borings (including 6 temporary well points using direct push methodology), and the installation of three, 2-inch monitoring wells (MW-1, MW-2, and MW-3). Soil and groundwater samples were collected, and analyzed, and the results of the investigation were reported in our December 1999 Subsurface Investigation Report of Findings (SHN, 1999).



SOURCE: SCOTIA USGS 7.5 MINUTE QUADRANGLE

1"=1000'±

SHN Consulting Engineers & Geologists, Inc.	PALCO Company Garage Scotia, California LOP #12272-Groundwater Investigation	Site Location Map SHN 089097.120	
	MAY 2005	089097.120-LOCATION	Figure 1



SHN Consulting Engineers & Geologists, Inc.	PALCO Company Garage LOP #12272 Scotia, California	Site Plan SHN 089097.120	
	OCTOBER 2004	089097.120-SITE-MAY-2005	Figure 2

The HCDEH responded, by letter dated March 23, 2000, to SHN's December1999 report of findings. One item requested by the HCDEH was that PALCO submit a work plan to further delineate and characterize the extent of soil and groundwater contamination at the site. SHN, on behalf of PALCO, submitted the requested work plan to the HCDEH on June 12, 2000. PALCO received formal written comments relative to the work plan from the HCDEH in a letter dated August 10, 2000.

PALCO, in conformance with the modified June 12, 2000, work plan and under permit from the HCDEH, authorized SHN to complete the additional subsurface investigation and the installation of a new groundwater-monitoring well (MW-4), which occurred on November 8 and 9, 2000. Soil and groundwater samples were collected, analyzed, and the results were reported in our November 2000 Site Investigation Report of Findings (SHN, January 2001).

On May 3, 2001, representatives from PALCO, HCDEH, and SHN met to discuss the findings of the November 2000 subsurface investigation, clarify outstanding contaminant fate issues that were previously raised by HCDEH, and formulate a course of action for ongoing site investigation and monitoring. SHN submitted a meeting memorandum of understanding dated May 9, 2001, which was acknowledged by the HCDEH in a letter of May 15, 2001. The consensus that was reached at the meeting was to continue monitoring the existing wells for an additional dry and wet season, and, utilizing the data collected, determine conditions for site closure or further investigation.

PALCO and HCDEH representatives attended an additional meeting with SHN on March 7, 2002, for the purpose of discussing the year 2001 monitoring data and requirements, and alternatives for expediting site closure. The meeting minutes were submitted by SHN in an April 3, 2002 letter to the HCDEH. On April 29, 2002, SHN submitted a letter to the HCDEH, addressing the five tasks that were outlined in our April 3, 2002 letter.

By letter dated October 24, 2002, the RWQCB concurred with SHN's September 25, 2002 request to reduce the monitoring well sampling frequency and reporting to annual in March.

On March 6, 2003, PALCO submitted a Remedial Action Feasibility Study to the HCDEH for their review and comment. HCDEH concurred, by letter dated April 14, 2003, with the feasibility proposal of using hydrogen peroxide for the remedial action, and requests a Remedial Action Plan (RAP).

On June 9, 2003, PALCO submitted the RAP. HCDEH conditionally concurred with the RAP by letter dated July 16, 2003, requested clarifications, and authorized the proposed pilot study.

RAP clarification items were submitted by PALCO to HCDEH on September 5, 2003. HCDEH commented on clarification items by letter dated October 9, 2003.

PALCO responded to HCDEH comments by letter dated November 13, 2003. On December 24, 2003, PALCO submitted to HCDEH the project Remedial Action Work Plan (RAWP).

On January 8, 2004, PALCO submitted the application and documents for the project Report of Waste Discharge (ROWD) to the RWQCB.

HCDEH commented on the RAWP by letter dated February 17, 2004. On February 24, 2004, the RWQCB commented by letter to the ROWD. PALCO responded to the RWQCB with Addendum No. 1, dated April 14, 2004, to the ROWD.

On September 23 and 24, 2004, SHN supervised Fisch Environmental of Valley Springs, California in the installation of 12 membrane interface probe borings and five soil borings/temporary well points. Results were presented in the Report of Findings for Additional Site Investigation (SHN, December 2004).

1.3 Geology and Hydrology

The PALCO Company Garage site is located on the south limb of the Eel River syncline on a fluvial terrace, approximately 1,000 feet southeast of the Eel River. Sedimentary deposits underlying the site consist of late Quaternary age alluvium deposited by the Eel River. According to the subsurface exploration logs for the piezometers and borings installed at the site, these deposits consist of medium-stiff to stiff clayey silt, which was moist to very moist and gray to yellowish brown in color.

Depth to groundwater ranges between 3 and 6 feet below grade at the project site. Additionally, a log pond, with a varying water surface elevation of approximately 132 feet above Mean Sea Level (MSL), is located approximately 100 feet northwest of the site. This log pond is presently assumed to act as a hydraulic barrier to groundwater movement from the source area toward downgradient receptors.

1.4 Objective and Scope of Work

The objective of the monitoring well installation was to collect data requested by the HCDEH and the RWQCB in order to further assess current site conditions.

The scope of work in this section is intended to meet the objective of this investigation. As part of this investigation, a soil sample was collected from one newly installed groundwater monitoring well boring (MW-7). Groundwater was sampled from all site-monitoring wells (MW-1 through MW-7).

The scope of work included the following items:

- Install one additional groundwater monitoring well.
- Develop the new monitoring well using surge and purge techniques.
- Perform groundwater monitoring and sampling of all existing and newly installed monitoring wells.
- Survey the new well for location and elevation.
- Prepare this report of findings for the monitoring well installation and groundwater-monitoring event.

2.0 Field Activities

2.1 Soil Boring

On March 4, 2005, SHN supervised Fisch Environmental in the advancement of one soil boring (MW-7) at the Company Garage site. The soil boring was advanced utilizing a truck-mounted Geoprobe® direct-push drill rig. Soil samples were collected with the Geoprobe® Macro-Core sampling system. Continuous core samples were collected. A portion of the core sample collected from immediately above the soil-water interface was prepared and submitted for laboratory analysis. Upon retrieval of the core sample, the selected portion of the sample tube was capped

with Teflon tape and plastic end caps. The remaining core sample was used to prepare a description that was recorded on the boring log field sheet, using the Unified Soil Classification System (USCS) as described in American Standard Test Method (ASTM) D 2488-90.

The soil sample was stored in an iced cooler, and transported to a State of California certified analytical laboratory for chemical analysis. The sample was transported using proper chain-of-custody documentation.

2.2 Monitoring Well Installation

Soil boring MW-7 was overdrilled with 8 ¼-inch diameter hollow stem augers and a groundwater monitoring well was installed in the borehole. The monitoring well was constructed in accordance with California Well Standards Bulletins 74-81 and 74-90.

The monitoring well was constructed using 5 feet of Schedule 40, 2-inch diameter Polyvinyl Chloride (PVC) casing and 10 feet of 0.010 inch-slot PVC screen. The filter pack was extended approximately one foot above the screened interval and consists of 2/12 Monterey sand. Bentonite chips were used as the transition seal and to fill the remainder of the annulus. A locking expansion plug was placed in the wellhead, and a flush-mount Christy box was installed and set in concrete to protect the wellhead.

The new groundwater monitoring well was surveyed for location and elevation under the direction of a California licensed surveyor. Groundwater-monitoring well elevations were referenced to NAVD88 (North American Vertical Datum 1988), to the nearest 0.01-foot.

Field notes, the boring log, and the survey data are included in Appendix A.

2.3 Monitoring Well Development

On March 23, 2004, SHN developed the new monitoring well. Prior to development, the well was checked for the presence of floating product, water level, and total depth. The well was then developed by surge and purge techniques. A surge block was used to surge the entire length of the screened interval, and suspended sediment was removed using a peristaltic pump. At least 5 casing volumes of groundwater were removed using the pump. The well was purged until turbidity was reduced, and physical parameters (pH, electrical conductivity, and temperature) stabilized. Physical parameters were checked after each casing volume of water was removed. Well development field notes are included in Appendix B.

2.4 Monitoring Well Sampling

The newly installed and existing site wells were sampled on March 23 and 24, 2005. Prior to purging, water level measurements were collected from each well. Each well was then checked for the presence of floating product. Water-level measurements were recorded to the nearest hundredth foot and well depth measurements were noted. Equipment that was used in taking water levels and well depth measurements was cleaned between each use, as discussed in Section 3.6. Groundwater monitoring field notes are included in Appendix B.

Each well was purged using new, disposable polyethylene bailers. During purging, Dissolved Oxygen (DO), Dissolved Carbon Dioxide (DCO_2), and the Oxidation-Reduction Potential (ORP) were measured using portable instrumentation. At least three well casing volumes were purged

from each well prior to collection of groundwater samples. Periodic measurements of temperature, pH, and Electrical Conductivity (EC) were made with field equipment during purging to evaluate whether the water samples are representative of the target zone.

Groundwater samples were collected using new disposable polyethylene bailers. Samples were collected in laboratory-supplied bottles, placed in an iced cooler, and handled under proper chain-of-custody procedures. All purge water and decontamination water was placed in Department of Transportation (DOT)-approved and labeled DOT 17 E/H, 55-gallon drums and handled in accordance with procedures described in Section 2.9.

2.5 Laboratory Analysis

The soil sample was analyzed for:

- Total Petroleum Hydrocarbons as Motor Oil (TPHMO), as Diesel (TPHD), and as Gasoline (TPHG) in general accordance with United States Environmental Protection Agency (EPA) Method No. 8015B.
- Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), and Methyl Tertiary-Butyl Ether (MTBE) in general accordance with EPA Method No. 8021B.

Groundwater samples were analyzed for:

- TPHD in general accordance with EPA Method No. 8015B.
- TPHG, BTEX, and Fuel Oxygenates in general accordance with EPA Method No. 8260B.

Groundwater samples from MW-7 were also analyzed for:

- TPHMO in general accordance with EPA Method No. 8015B.
- Volatile Organic Compounds (VOCs) in general accordance with EPA Method No. 8260B.
- Dissolved methane in general accordance with Modified RSK-175.
- Chemical Oxygen Demand (COD) in general accordance with EPA Method No. 410.4.
- Total Phosphate Phosphorus in general accordance with EPA Method No. 365.2
- Ammonia Nitrogen in general accordance with EPA Method No. 350.3.
- Alkalinity in general accordance with Standard Method 19th Ed. 2320B.
- Nitrate and Sulfate in general accordance with EPA Method No. 300.0.
- Total Dissolved Solids (TDS) in general accordance with EPA Method No. 160.1.
- CAM 17 metals in general accordance with EPA Method Nos. 200.7, 200.9, and 245.1.

Dissolved methane analyses were performed by Air Toxics of Folsom, California. The rest of the analyses were performed by North Coast Laboratories of Arcata, California.

2.6 Equipment Decontamination Procedures

All soil boring/monitoring well installation, well purging, and sampling equipment was cleaned prior to bringing it on site. All small equipment that required on-site cleaning was cleaned using the triple wash system. The equipment was first washed in a water solution containing Liquinox® cleaner, followed by a distilled water rinse, then by a second distilled water rinse.

2.7 Investigation-Derived Waste Management

All solid waste material produced during the drilling was contained in DOT-approved 17 E/H, 55-gallon drums and stored on site. The drum was labeled to designate the contents and the locations from which the material was generated. One drum of soil cuttings was produced. The soil from MW-7 is stored inside the gate near MW-5.

All water produced during the well installation, well development and purging activities was temporarily stored on site in drums or in 5-gallon plastic buckets. The water was then placed into the wastewater collection system for treatment at the Scotia wastewater treatment plant. SHN documented the time, date, and quantity of water disposed. SHN discharged approximately 70 gallons of water into the Scotia wastewater collection system.

3.0 Investigation Results

No petroleum hydrocarbon constituents were detected in the soil sample collected from borehole MW-7. Results are presented in Table 1. Laboratory analytical reports are included in Appendix C.

Table 1
Soil Analytical Data, March 4, 2005
PALCO Company Garage, Scotia, California
(in ug/g[1])

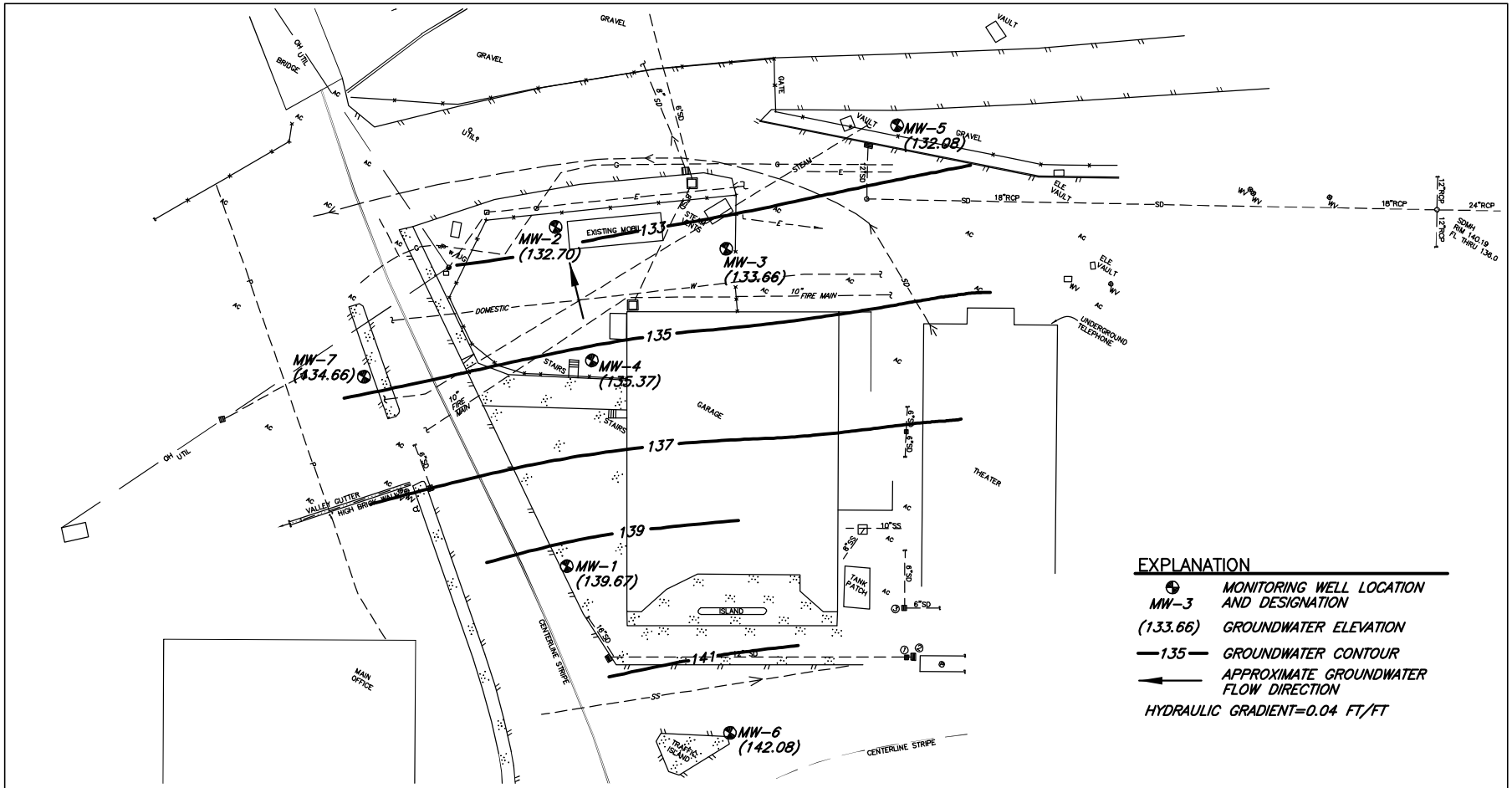
Sample Location and Depth (feet)	TPHMO[2]	TPHD[2]	TPHG[2]	B[3]	T[3]	E[3]	X[3]	MTBE[3]
MW-7 @ 7.5'	<10[4]	<1.0	<1.0	<0.0050	<0.010	<0.0050	<0.0050	<0.050

1. ug/L: micrograms per gram
2. Total Petroleum Hydrocarbons as Motor Oil (TPHMO) and as Diesel (TPHD), and as Gasoline (TPHG) analyzed in general accordance with EPA Method No. 8015B
3. Benzene (B), Toluene (T), Ethylbenzene (E), total Xylenes (X), and Methyl Tertiary Butyl Ether (MTBE) analyzed in general accordance with EPA Method No. 8021B
4. <: denotes a value that is "less than" the method detection limit

4.0 Groundwater Monitoring Results

4.1 Hydrogeology

Depth-to-groundwater measurements were collected on March 23, 2005. The direction of groundwater flow on March 23, 2005 was to the northwest with an approximate gradient of 0.04. Figure 3 shows groundwater contours on March 23, 2005. Groundwater elevations are represented in Table 1. Historic monitoring data is included in Appendix D.



Consulting Engineers & Geologists, Inc.	PALCO Company Garage LOP #12272 Scotia, California		Groundwater Contours March 23, 2005 SHN 089097.120
	MAY 2005	089097.120-GWC-MAR-2005	Figure 3

Table 2 Groundwater Elevations, March 23, 2005 PALCO Company Garage, Scotia, California			
Sample Location	Measuring Point Elevation	Depth-to-Water[2]	Groundwater Elevation[1]
MW-1	142.64	2.97	139.67
MW-2	137.66	4.96	132.70
MW-3	138.29	4.63	133.66
MW-4	139.74	4.37	135.37
MW-5	136.00	3.92	132.08
MW-6	146.95	4.87	142.08
MW-7	140.89	6.23	134.66
Log Pond Surface	134.49	2.32	132.17

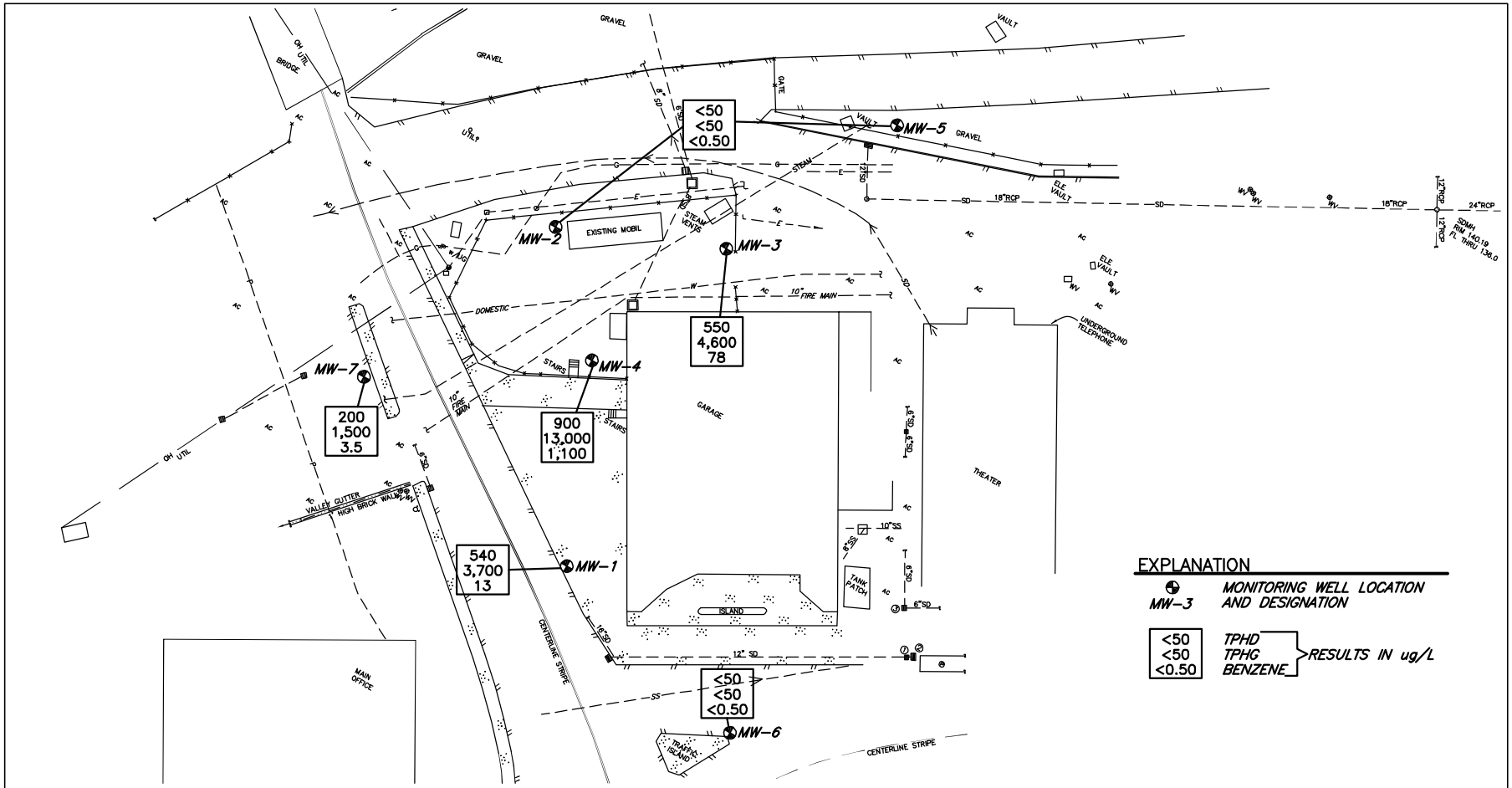
1. Relative to NAVD88 (North American Vertical Datum 1988)
2. Below top of casing

4.2 Groundwater Analytical Results

No petroleum hydrocarbons were detected in groundwater samples from MW-2, MW-5, or MW-6. Low to moderate concentrations of petroleum hydrocarbons were detected in groundwater samples from MW-1, MW-3, MW-4, and MW-7 (Table 3). TPHG and benzene concentrations from each impacted well are slightly higher than those detected during the March 2004 groundwater-monitoring event. Low concentrations of VOCs detected in groundwater samples from MW-7 (Table 4) are consistent with a release of gasoline. Laboratory analytical reports are included in Appendix C. Historic monitoring data is included in Appendix D.

Dissolved metals analyses are included in Table 5. Low concentrations of dissolved arsenic and dissolved barium were detected in groundwater from MW-7. High concentrations of dissolved iron and moderate concentrations of dissolved manganese were detected in groundwater from MW-7. The concentrations of dissolved iron and manganese are likely due to biologic reduction of iron and manganese oxides. Additional groundwater analytical results are included in Table 6.

Figure 4 depicts a summary of the March 23 and 24, 2005 groundwater analytical results.



Consulting Engineers & Geologists, Inc.	PALCO Company Garage LOP #12272 Scotia, California		Summary of Groundwater Analytical Results, March 23&24, 2005 SHN 089097.120
	MAY 2005	089097.120-SUM-GAR-MAR-2005	Figure 4

Table 3
Groundwater Analytical Results, March 23 & 24, 2005
PALCO Company Garage, Scotia, California
(in ug/L)[1]

Sample Location	TPHMO[2]	TPHD[2]	TPHG[3]	B[4]	T[4]	E[4]	X[4]	MTBE[5]	DIPE[5]	ETBE[5]	TAME[5]	TBA[5]
MW-1	NA[6]	540[7]	3,700[8]	13	4.8	13	6.6	<1.0[9]	<1.0	<1.0	<1.0	<10
MW-2	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<10
MW-3	NA	550[7]	4,600[8]	78	15	31	19.6	<10	<10	<10	<10	<100
MW-4	NA	900[7]	13,000[8]	1,100	73	150	73	<8.0	<1.0	<1.0	<1.0	<32
MW-5	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<10
MW-6	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<10
MW-7	<170	200[7]	1,500[8]	3.5	2.6	2.0	3.23	<1.0	<1.0	<1.0	<1.0	<10

1. ug/L: micrograms per liter
2. Total Petroleum Hydrocarbons as Motor Oil (TPHMO) and as Diesel (TPHD) analyzed in general accordance with EPA Method No. 8015B
3. Total Petroleum Hydrocarbons as Gasoline (TPHG) analyzed in general accordance with EPA Method No. 8260B
4. Benzene (B), Toluene (T), Ethylbenzene (E), total Xylenes (X) analyzed in general accordance with EPA Method No. 8260B
5. Methyl Tertiary-Butyl Ether (MTBE), Diisopropyl Ether (DIPE), Ethyl Tertiary-Butyl Ether (ETBE), Tertiary-Amyl Methyl Ether (TAME) and Tertiary-Butyl Alcohol (TBA) analyzed in general accordance with EPA Method No. 8260B
6. NA: Not analyzed
7. Contain some material lighter than diesel; however, some of this material extends into the diesel range of molecular weights. The samples also contain material in the diesel range of molecular weights, but the material does not exhibit the peak pattern typical of diesel oil.
8. Appear to be similar to gasoline but contain peak ratios not that of a fresh gasoline standard. The reported results represent the amount of material in the gasoline range.
9. <: Denotes a value that is "less than" the method detection limit.

Table 4
Volatile Organic Compound Analytical Results[1], March 24, 2005
PALCO Company Garage, Scotia, California
(in ug/L[2])

Sample Location	2,2-Dichloro-propane	Isopropyl-benzene	n-Propyl-benzene	1,3,5-Trimethyl-benzene	Tertiary-Butyl-benzene	1,2,4-Trimethyl-benzene	Sec-Butyl-benzene	4-Isopropyl-toluene	n-Butyl-benzene	Naphthalene
MW-7	<5.0	7.9	16	<1.0	7.9	<1.0	<4.0	<1.0	2.9	<2.0

1. Only compounds that were detected previously at the site are shown. See laboratory analytical reports for the full list of compounds analyzed.
2. ug/L: micrograms per Liter
3. <: Denotes a value that is "less than" the method detection limit.

Table 5
CAM 17 Metals[1] in Groundwater, March 24, 2005
PALCO Company Garage, Scotia, California
(in ug/L[1])

Sample Location	As[2]	Sb[2]	Ba[2]	Be[2]	Cd[2]	Cr[2]	Co[2]	Cu[2]	Fe[2]	Mn[2]	Mo[2]	Ni[2]	Ag[2]	V[2]	Zn[2]	Pb[2]	Hg[2]	Se[2]	Tl[2]
MW-7	40	<50	14	<1.0	<10	<10	<10	<10	7,600	3,500	30	<20	<10	<10	<20	<10	<1.0	<10	<10

1. ug/L: micrograms per Liter
2. As: Arsenic, Sb: Antimony, Ba: Barium, Be: Beryllium, Cd: Cadmium, Cr: Chromium, Co; Cobalt, Cu: Copper, Fe: Iron, Mn: Manganese, Mo: Molybdenum, Ni: Nickel, Ag: Silver, V: Vanadium, Zn: Zinc, Pb: Lead, Hg: Mercury, Se: Selenium, Tl: Thallium
3. <: denotes a value that is "less than" the method detection limit.

Table 6
Additional Groundwater Analytical Parameters, March 24, 2005
PALCO Company Garage, Scotia, California

Sample Location	Ammonia Nitrogen (mg/L)[1]	Chemical Oxygen Demand (mg/L)	Total Phosphate Phosphorous (mg/L)	Alkalinity (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Dissolved Methane (ug/ml)[2]	Nitrogen Total Kjeldahl	Total Nitrogen
MW-7	1.5	140	2.4	400	<0.10[3]	2.1	510	2.7	3.6	3.6

1. mg/L: milligrams per Liter
2. ug/ml: micrograms per milliliter
3. <: Denotes a value that is "less than" the method detection limit.

4.3 Natural Attenuation Parameters

Monitoring for indicators of biodegradation was performed on groundwater from site wells during the March 2005 monitoring event. DO and ORP concentrations in monitoring wells MW-1 through MW-5 were decreased when compared to upgradient well MW-6. DCO_2 concentrations in monitoring wells MW-1 through MW-5 were increased when compared to upgradient well MW-6. This information indicates that biodegradation of hydrocarbons is occurring. Measurement results are presented in Table 7. Historic monitoring data is included in Appendix D.

Table 7
DO, DCO_2, and ORP Measurement Results, March 23, 2005
PALCO Company Garage, Scotia, California

Sample Location	DO[1] (ppm)[2]	DCO_2 [3] (ppm)	ORP[4] (mV)[5]
MW-1	0.68	170	-83
MW-2	0.70	160	-48
MW-3	0.91	90	-90
MW-4	0.66	350	-111
MW-5	1.76	50	13
MW-6	0.72	70	108
MW-7	0.72	50	-62

1. DO: Dissolved Oxygen, field measured using portable instrumentation.
2. ppm: Measurement concentration, in parts per million.
3. DCO_2: Dissolved Carbon Dioxide, field measured using a field test kit.
4. ORP: Oxidation-Reduction Potential measured using portable instrumentation.
5. mV: millivolts

5.0 Discussion and Recommendations

Low to moderate concentrations of petroleum hydrocarbons were detected in groundwater from monitoring wells MW-1, MW-3, MW-4, and MW-7, with the highest concentrations in MW-4.

Per the May 12, 2005 letter from the HCDEH, on behalf of PALCO, SHN will perform biannual sampling at the company garage site. Groundwater samples from monitoring wells MW-1 through MW-7 will be analyzed for TPHD, TPHG, BTEX, and 5 fuel oxygenates. The next monitoring and sampling event is scheduled for September 2005.

6.0 References Cited

SHN Consulting Engineers & Geologists, Inc. (2000). ***December 1999 Subsurface Investigation Report of Findings, PALCO Company Garage, Scotia, CA, HCDEH LOP #12272.*** Eureka: SHN.

---. (2001). ***November 2000 Site Investigation Report of Findings, PALCO Company Garage, Scotia, CA, HCDEH LOP #12272.*** Eureka: SHN.

---.(2003). ***Remedial Action Work Plan PALCO Company Garage, Scotia, California; LOP #12272.*** Eureka: SHN.

---.(December 2005). ***Report of Findings for Additional Site Investigation PALCO Company Garage, Scotia, California; LOP #12272.*** Eureka: SHN.

Appendix A

Well Installation Field Notes

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DAILY FIELD REPORT

Job No. 089092.00
Page 1 of 1

Project Name: FALCO CO GARAGE	Client/Owner	Daily Field Report Sequence No: 1	
General Location Of Work: SCOTIA	Owner/Client Representative	Date: 3-4-05	Day Of Week: FRI
General Contractor: FISCH	Grading Contractor	Project Engineer: M. UAN	
Type Of Work: MW INSTALL	Grading Contractor, Superintendent, Or Foreman	Supervisor: R. RUBSEN	
Source & Description Of Fill Material	Weather: RAIN	Technician	
	Key Persons Contacted (Civil Engr, Architect, Developer, Etc)		

Describe Equipment Used For Hauling, Spreading, Watering, Conditioning, & Compacting

12:30 START @ MW-7 CORE TO 12 SAMPLE D.5-8'
12:50 BEGIN OVERDRILL BORING
DRILL TO 15' 8.25" AUGERS
SET WELL 10' SCREEN - FLUSH MOUNT

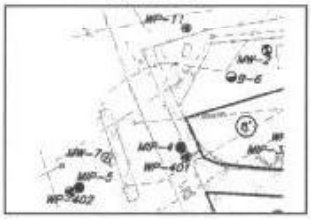
1 DRUM OF SOIL TO BE W/ SOIL FROM MW-5, 6 INSIDE MILL A GATE NEAR MW-5

14:30 OFF-SITE

	Copy given to:	Reported By:

Consulting Engineers & Geologists, Inc.
812 West Wabash, Eureka, CA ph. (707) 441-8855 fax. (707) 441-8877

MONITORING WELL LOG
MW-7



PROJ. NAME: PALCO Company Garage
PROJ. NUMBER: 089097.120
DRILLER: Fisch Environmental
DRILLING METHOD: GeoProbe / HSA
SAMPLER TYPE: Macro Core
LOGGED BY: R. Rueber

LOCATION: Scotia, CA
TOC ELEVATION: 140.89 Feet (NAVD88)
DEPTH OF BORING/WELL: 15.0 / 15.0 Feet BGS
DEPTH TO FIRST WATER: ~8.0 Feet BGS
SCREEN INTERVAL: 5.0-15.0 Feet BGS
DATE: 3/4/05

ELEV. (Feet NAVD88)	DEPTH (Feet BGS)	WATER LEVEL	SAMPLE: OVA READING (ppm)	SAMPLE: BLOWS / 6"	SAMPLE: RECOVERY (%)	SAMPLE: DRILLING	SAMPLE: LABORATORY	USCS	LITHOLOGY PATTERN	SOIL DESCRIPTION	REMARKS	MONITORING WELL CONSTRUCTION
140	0									Gravel Baserock		Flushmount Christy Box Locking Cap
								CL		CLAY/FILL, with silt, with gravel, fine, subangular to subrounded, stiff, mottled reddish brown and dark grey		Concrete
												Bentonite Chips
			0									2" SCH 40 PVC Blank
	5										Contact Approximate	
135										CLAY, with silt, trace sand, fine, stiff, slightly moist, greenish grey, few organics and roots, slight hydrocarbon odor 6-10'	DTW = 6.23' (3-23-05)	
												2/12 Monterey Sand
			0					ML		SILT, with clay, with sand, fine, soft, wet, greenish grey, few roots and organics		
	10										Contact Approximate	
130								CL		CLAY, with silt, trace sand, fine, stiff, mottled greenish grey and reddish brown		
			0									2" SCH 40 PVC Screen (0.010 slot)
										Total depth of Macro Core = 12.0 Feet BGS		
	15											PVC End Cap
125												

BORING LOG

Monitoring Well Survey Report for: PALCO Garage

SHN # 0089097.120 PM: Lay Survey By: JTG & EWW Date: 5/11/05

Survey References: FB E-02-2 pg. 33 & TDS file 0089097B

Elevation Datum: NAVD 88 per tie to LV 0393 Designation S-100

Horizontal Datum: NAD 83 per GPS ties to CT monuments "ASCO" & "R51.8L"
Corpscon from NAD 27 Coords.

Well Data:

#			
# MW-7	TOC el. 140.89	Rim el. 141.15	Grnd. el. 141.06
	Northing: 2066610.933670	Easting: 5976652.201707	Pt. # 2202
	Comment: No Notch		
#	TOC el.	Rim el.	Grnd. el.
	Northing:	Easting:	Pt. #
	Comment:		
#	TOC el.	Rim el.	Grnd. el.
	Northing:	Easting:	Pt. #
	Comment:		
#	TOC el.	Rim el.	Grnd. el.
	Northing:	Easting:	Pt. #
	Comment:		
#	TOC el.	Rim el.	Grnd. el.
	Northing:	Easting:	Pt. #
	Comment:		
#	TOC el.	Rim el.	Grnd. el.
	Northing:	Easting:	Pt. #
	Comment:		
#	TOC el.	Rim el.	Grnd. el.
	Northing:	Easting:	Pt. #
	Comment:		
#	TOC el.	Rim el.	Grnd. el.
	Northing:	Easting:	Pt. #
	Comment:		
#	TOC el.	Rim el.	Grnd. el.
	Northing:	Easting:	Pt. #
	Comment:		
#	TOC el.	Rim el.	Grnd. el.
	Northing:	Easting:	Pt. #
	Comment:		

TOC elevs. are at notch or north side of casing. Rim elevs. are at north rim. Ground elevs. are average around well, unless noted.

Calcs By: ______ Checked By: ______ Sht. ___ of ___

Appendix B

Groundwater Monitoring Field Sheets

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812 W. Wabash • Eureka, CA 95501 • Tel: 707.441.8855 • FAX: 707.441.8877 •E-mail: shninfo@shn-engr.com

DAILY FIELD REPORT

JOB NO 089097.120
Page 1 of

PROJECT NAME: PALCO Company Garage	CLIENT/OWNER: PALCO	DAILY FIELD REPORT SEQUENCE NO: 1	
GENERAL LOCATION OF WORK: Scotia, CA	OWNER/CLIENT REPRESENTATIVE: Bob Vogt	DATE: 3-23-05	DAY OF WEEK: Wednesday
TYPE OF WORK: Quarterly Sampling	WEATHER: Overcast	PROJECT ENGINEER/ SUPERVISOR: Martin E. Lal	
SOURCE & DESCRIPTION OF FILL MATERIAL	KEY PERSONS CONTACTED	TECHNICIAN: David R. Paine	

DESCRIBE EQUIPMENT USED FOR HAULING, SPREADING, WATERING, CONDITIONING, & COMPACTING

0847	ARRIVED at site, removed lids and caps on all 7 wells,
0922	I started taking water levels deconing the sounder after each well by scrubbing it with liquinox then rinsing it with DI water.
0948	I started taking D O Readings.
1043	I started purging mw-6 with a disposable bailer, purge water was caught in a graduated 5 gal. bucket.
1120	I sampled mw-6, secured well with cap and lid.
1211	I started purging mw-2 with a disposable bailer after I fished out the old one that got left in well last year, purge water was caught in a graduated 5 gal. bucket.
1245	I sampled mw-2, secured well with cap and lid.
1251	I started purging mw-5 with a disposable bailer, purge water was caught in a graduated 5 gal. bucket.
1330	I started purging mw-1 with a disposable bailer, purge water was caught in a graduated 5 gal. bucket.
1400	I sampled mw-5, secured well with cap and lid.
1410	I sampled mw-1, secured well with cap and lid.
1421	I started purging mw-3 with a disposable bailer, purge water was caught in a graduated 5 gal bucket.
1454	I started purging mw-4 with a disposable bailer, purge water was caught in a graduated 5 gal. bucket.
1516	I took Eh and CO_2 on mw-7 with a disposable bailer.
1525-1530	I started purging mw-7 with a sump block and 15' of ½ S.h 40 pipe.
1538	I started purging mw-7 with the peristalic pump, all purge water was caught in a graduated 5 gal. bucket.
1600	I sampled mw-3 secured well with cap and lid.
1620	I sampled mw-4, secured well with cap and lid.
1744	OFF SITE
Note	All decon water and purge water was caught then dumped down the drain behind the old Bertains laundry building that leads to the sewer treatment plant. ~ 70 GALLONS

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REPORTED BY: D. R. P.

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DAILY FIELD REPORT

JOB NO 089097.120
Page 2 of 12

PROJECT NAME: PALCO Company Garage	CLIENT/OWNER: PALCO	DAILY FIELD REPORT SEQUENCE NO: 2	
GENERAL LOCATION OF WORK: Scotia, CA	OWNER/CLIENT REPRESENTATIVE: Bob Vogt	DATE: 2-24-05	DAY OF WEEK: Thursday
TYPE OF WORK: Quarterly Sampling	WEATHER: Overcast	PROJECT ENGINEER/ SUPERVISOR: Martin E. Lay	
SOURCE & DESCRIPTION OF FILL MATERIAL	KEY PERSONS CONTACTED	TECHNICIAN: David R. Paini	

DESCRIBE EQUIPMENT USED FOR HAULING, SPREADING, WATERING, CONDITIONING, & COMPACTING

0757 ARRIVED at site, Removed lid and cap on MW-7.
0820 I sampled MW-7, secured well with cap and lid.
0834 OFF SITE

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REPORTED BY: D. R. P.

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Groundwater Elevations

Job No.: 089097.120 Name: David R. Paine

Client: PALCO Date: 3-23-05

Location: COMPANY GARAGE SCOTIA, CA Weather: Overcast

Sample Location	Time of Reading	Top of Casing Elevation (feet)	Depth To Water (feet)	Water Surface Elevation (feet)
MW-1	0933	142.64	2.97	139.67
MW-2	0928	137.66	4.96	132.70
MW-3	0936	138.29	4.63	133.66
MW-4	0938	139.74	4.37	135.37
MW-5	0931	136.00	3.92	132.08
MW-6	0926	146.95	4.87	142.08
POND ELEVATION	0945	134.49	2.32	132.17
MW-7	0922	140.89	6.23	134.66

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EQUIPMENT CALIBRATION SHEET

Name: David R. Paine

Project Name: PALCO Company Garage

Reference No.: 089097.120

Date: 3/23/05

Equipment: ☒ pH & EC ☐ PID ☐ $GTCO_2$ ☐ GTLEL
☐ Turbidity ☒ Other Dissolved Oxygen Meter YSI95

Description of Calibration Procedure and Results:

pH-Ec meter is calibrated using a 2 buffer method with 7.01 and 4.01, the Ec (conductivity) is set at 1413 µS.

DO meter is self calibrating with the Altimeter set at 1.

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Water Sampling Data Sheet

Project Name: PALCO Company Garage
Project No.: 089097.120
Location: Scotia, CA
Well #: MW-1
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 3-23-05
Sampler Name: David R. Pain
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
19.80	-	2.97	=	16.83	x	0.163	=	2.74

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1022	0.68						0 gal.	
1330	↓	170	-83				0.25 gal.	
1340	↓			679	63.6°	6.66	2.75 gal.	
1346	No Flow			671	64.1°	6.64	5.50 gal	
1352	Flow cell			629	64.3°	6.56	8.25 gal.	
1410	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 8.25 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-1	3-40ml VOA's	YES HCL	NCL	8260 list 1
MW-1	2-60ml VOA's	None	NCL	TPHD

Well Condition: Good
Remarks: Recharged to 7.09 at sample time

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Water Sampling Data Sheet

Project Name: PALCO Company Garage
Project No.: 089097.120
Location: E Scotia, CA
Well #: MW-2
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 3-23-05
Sampler Name: David R. Pain
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
14.95	-	4.96	=	9.99	x	0.163	=	1.63

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1000	0.70						0 gal.	
1211	↓	160	-48				0.25 gal.	
1222	↓			557	59.4°	6.54	1.75 gal.	
1226	No Flow			528	60.3°	6.51	3.50 gal	
1231	Thru cell			499	60.6°	6.46	5 gal.	
1235				498	60.9°	6.47	6.50 gal.	
1245	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 6.50 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-2	3-40ml VOA's	YES HCL	NCL	8260 list 1
MW-2	2-60 ml VOA's	None	NCL	TPHD

Well Condition: Good
Remarks: Recharged to 6.60 at sample time

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Water Sampling Data Sheet

Project Name: PALCO Company Garage
Project No.: 089097.120
Location: E Scotia, CA
Well #: MW-3
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 3-23-05
Sampler Name: David R. Pain
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
14.95	-	4.63	=	10.32	x	0.163	=	1.68

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1029	0.91						0 gal.	
1421	↓	90	-90				0.25 gal.	
1430	↓			415	74.4°	6.50	1.75 gal.	
1434	No Flow			534	74.8°	6.52	3.50 gal	
1439	Have cell			584	74.9°	6.51	5.25 gal.	
1444				618	74.3°	6.51	7 gal.	
1449				542	74.5°	6.51	8.50 gal.	
1600	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 8.50 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-3	3-40ml VOA's	YES HCL	NCL	8260 list 1
MW-3	2-60ml VOA's	None	NCL	TPHD

Well Condition: Good
Remarks: Recharged to 4.85 at sample time

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Water Sampling Data Sheet

Project Name: PALCO Company Garage
Project No.: 089097.120
Location: Scotia, CA
Well #: MW-4
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 3-23-05
Sampler Name: David R. Pain
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
15.05	-	4.37	=	10.68	x	0.163	=	1.74

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1035	0.66						0 gal.	
1454	↓	350	-111				0.25 gal.	
1503	↓			1179	62.2°	6.63	1.25 gal.	
1507	No Flow			1191	62.4°	6.63	3.50 gal	
1511	Flow cell			1202	62.6°	6.65	5.25 gal.	
1620	Sample	Time						

Purge Method: Hand Bail
Total Volume Removed: 5.25 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-4	3-40ml VOA's	YES HCL	NCL	8260 list 1
MW-4	2-60ml VOA's	None	NCL	TPHD

Well Condition: Good
Remarks: Recharged to 4.70 at sample time

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Water Sampling Data Sheet

Project Name: PALCO Company Garage
Project No.: 089097.120
Location: Scotia, CA
Well #: MW-5
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 3-23-05
Sampler Name: David R. Pain
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
13.91	-	3.92	=	9.99	x	0.163	=	1.63

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1008	1.76						0 gal.	
1251	↓	50	13				0.25 gal.	
1300	↓			356	68.6°	6.34	1.25 gal.	
1306	No Flow			447	69.7°	6.39	3.50 gal	
1312	Flow cell			620	70.6°	6.38	5 gal.	
1319				627	71.1°	6.39	6.25 gal	
1324				644	70.7°	6.41	8.25 gal.	
1400	Sample	Time						

Purge Method: Hand Bail
Total Volume Removed: 8.25 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-5	3-40ml VOA's	YES HCL	NCL	8260 list 1
MW-5	2-60ml VOA's	None	NCL	TPHD

Well Condition: Good
Remarks: Recharged to 5.28 at sample time

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Water Sampling Data Sheet

Project Name: PALCO Company Garage
Project No.: 089097.120
Location: Scotia, CA
Well #: MW-6
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 6-23-05
Sampler Name: David R. Pain
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
13.78	-	4.87	=	8.91	x	0.163	=	1.45

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
0953	0.72						0 gal.	
1043	↓	70	108				0.25 gal.	
1052	↓			401	61.7°	6.27	1.50 gal.	
1058	No Flow			387	62.2°	6.23	3 gal	
1103	Flow cell			384	62°	6.23	4.50 gal.	
1120	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 4.50 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-6	3-40ml VOA's	YES HCL	NCL	8260 list 1
MW-6	2-60ml VOA's	None	NCL	TPHD

Well Condition: Good
Remarks: Recharged to 5.32 at sample time

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Water Sampling Data Sheet

Project Name:	PALCO Company Garage	Date/Time:	3-23-05
Project No.:	089097.120	Sampler Name:	David R. Paine
Location:	Scotia, CA	Sample Type:	Ground water
Well #:	MW-7	Weather	Overcast
Hydrocarbon Thickness/Depth (feet):	NA	Key Needed:	YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
14.05	-	6.23	=	7.82	x	0.163	=	1.27

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1015	0.72						0 gal.	
1516	↓	50	-62				0.25 gal.	
1538	↓			935	66.8°	6.74	gal.	start
1546	No Flow			983	66.8°	6.91	2 gal.	
1555	thru cell			908	68.5°	6.55	4 gal.	
1604				860	68.9°	6.53	6 gal	
1623				839	69.2°	6.48	10 gal.	
1641				839	70.4°	6.52	14 gal.	
1659				835	69.2°	6.50	18 gal	
1718				842	70.9°	6.51	22 gal.	
1736				839	70.5°	6.51	26 gal	

Purge Method: Peristaltic pump Total Volume Removed: 27.00 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-7	3-40ml VOA's	YES HCL	NCL	8260 list 7
MW-7	3-40ml VOA's	YES HCL	NCL	Dissolved Methane
MW-7	2-60 ml VOA's	None	NCL	TPHD / MO
MW-7	500ml Amber	YES H_2SO_4	NCL	COD and Ammonia
MW-7	500ml Amber	YES H_2SO_4	NCL	Nitrogen and T PO_4
MW-7	500ml plastic	None	NCL	TDS, NO_3, SO_4, Alk
MW-7	500 ml plastic	None	NCL	CAM 17 metals + Mn & Fe

Well Condition: Good

Remarks:

3/24/05 Recharged to 6.83 at sampling Time 0820

Appendix C

Laboratory Analytical Reports

NORTH COAST LABORATORIES LTD.

March 21, 2005

Pacific Lumber-M
P.O. Box 37
125 Main St
Scotia, CA 95565-0037
Attn: Bob Vogt / Environmental Service

RE:

Order No.: 0503177
Invoice No.: 48897
PO No.: M7007
ELAP No. 1247-Expires July 2006

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	MW-7 @ 7.5'

ND = Not Detected at the Reporting Limit
Limit = Reporting Limit
All solid results are expressed on a wet-weight basis unless otherwise noted.

REPORT CERTIFIED BY

Laboratory Supervisor(s) | QA Unit | Jesse G. Chaney, Jr.
Laboratory Director

5680 West End Road • Arcata California 95521-9202 • 707-822-4649 • FAX 707-822-6831

North Coast Laboratories, Ltd. **Date:** *21-Mar-05*

CLIENT: Pacific Lumber-M
Project:
Lab Order: 0503177

CASE NARRATIVE

BTEX:
Some reporting limits were raised for sample MW-7 @ 7.5' due to matrix interference.

NORTH COAST LABORATORIES
5680 West End Road • Arcata, California 95521-9202 • 707-822-4649 • FAX 707-822-6831

Date: 21-Mar-05
WorkOrder: 0503177

ANALYTICAL REPORT

Client Sample ID: MW-7 @ 7.5'
Received: 3/7/05
Collected: 3/4/05 12:50
Lab ID: 0503177-01A

Test Name: BTEX
Reference: EPA 5035/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
MTBE	ND	0.050	µg/g	1.0	3/15/05	3/16/05
Benzene	ND	0.0050	µg/g	1.0	3/15/05	3/16/05
Toluene	ND	0.010	µg/g	1.0	3/15/05	3/16/05
Ethylbenzene	ND	0.0050	µg/g	1.0	3/15/05	3/16/05
m,p-Xylene	ND	0.0050	µg/g	1.0	3/15/05	3/16/05
o-Xylene	ND	0.0050	µg/g	1.0	3/15/05	3/16/05
Surrogate: Cis-1,2-Dichloroethylene	101	71.8-135	% Rec	1.0	3/15/05	3/16/05

Test Name: TPH as Diesel/Motor Oil
Reference: EPA 3550/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	1.0	µg/g	1.0	3/10/05	3/15/05
TPHC Motor Oil	ND	10	µg/g	1.0	3/10/05	3/15/05

Test Name: TPH as Gasoline
Reference: EPA 5035/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	ND	1.0	µg/g	1.0	3/15/05	3/16/05

NORTH COAST LABORATORIES
5680 West End Road - Arcata, California 95521-9202 - 707-822-4649 - FAX 707-822-6831

North Coast Laboratories, Ltd.

Date: 21-Mar-05

CLIENT: Pacific Lumber-M
Work Order: 0503177
Project:

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-13166** Batch ID: **13166** Test Code: **BTXES** Units: **µg/g** Analysis Date: **3/16/05 10:23:52 AM** Prep Date: **3/15/05**
Client ID: Run ID: **ORGC8_050315A** SeqNo: **490344**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	ND	0.050									
Benzene	ND	0.0050									
Toluene	ND	0.0050									
Ethylbenzene	ND	0.0050									
m,p-Xylene	ND	0.0050									
o-Xylene	ND	0.0050									
Cis-1,2-Dichloroethylene	0.791	0.10	1.00	0	79.1%	72	135	0			

Sample ID: **MB-13166** Batch ID: **13166** Test Code: **BTXES** Units: **µg/g** Analysis Date: **3/16/05 10:23:52 AM** Prep Date: **3/15/05**
Client ID: Run ID: **ORGC8_050315C** SeqNo: **491195**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	ND	0.050									
Benzene	ND	0.0050									
Toluene	ND	0.0050									
Ethylbenzene	ND	0.0050									
m,p-Xylene	ND	0.0050									
o-Xylene	ND	0.0050									
Cis-1,2-Dichloroethylene	0.879	0.10	1.00	0	87.9%	72	135	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503177
Project:

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-13166**	Batch ID: **13166**	Test Code: **BTXES**	Units: **µg/g**		Analysis Date: **3/16/05 10:39:01 PM**			Prep Date: **3/15/05**		
Client ID:		Run ID: **ORGC8_050315C**			SeqNo: **491204**					
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	ND	0.050									
Benzene	0.003632	0.0050									J
Toluene	0.004950	0.0050									J
Ethylbenzene	0.003278	0.0050									J
m,p-Xylene	ND	0.0050									
o-Xylene	0.003963	0.0050									J
Cis-1,2-Dichloroethylene	0.920	0.10	1.00	0	91.9%	72	135	0			

Sample ID: **MB-13166**	Batch ID: **13166**	Test Code: **TPHCGS**	Units: **µg/g**		Analysis Date: **3/16/05 10:39:01 PM**			Prep Date: **3/15/05**		
Client ID:		Run ID: **ORGC8_050315B**			SeqNo: **490871**					
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gas (C6-C14)	0.3736	1.0									J

Sample ID: **MB-13141**	Batch ID: **13141**	Test Code: **TPHDMS**	Units: **µg/g**		Analysis Date: **3/15/05 12:05:20 PM**			Prep Date: **3/10/05**		
Client ID:		Run ID: **ORGC7_050315A**			SeqNo: **490155**					
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	ND	1.0									
TPHC Motor Oil	ND	10									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

North Coast Laboratories, Ltd.

Date: 21-Mar-05

CLIENT: Pacific Lumber-M
Work Order: 0503177
Project:

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-13166** Batch ID: **13166** Test Code: **BTXES** Units: **µg/g** Analysis Date: **3/15/05 7:39:32 PM** Prep Date: **3/15/05**
Client ID: Run ID: **ORGC8_050315A** SeqNo: **490343**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	0.3160	0.050	0.400	0	79.0%	75	124	0			
Benzene	0.04793	0.0050	0.0500	0	95.9%	80	128	0			
Toluene	0.05069	0.0050	0.0500	0	101%	85	126	0			
Ethylbenzene	0.04603	0.0050	0.0500	0	92.1%	80	126	0			
m,p-Xylene	0.09010	0.0050	0.100	0	90.1%	84	130	0			
o-Xylene	0.04490	0.0050	0.0500	0	89.8%	84	125	0			
Cis-1,2-Dichloroethylene	0.908	0.10	1.00	0	90.8%	72	135	0			

Sample ID: **LCS-13166** Batch ID: **13166** Test Code: **BTXES** Units: **µg/g** Analysis Date: **3/15/05 7:39:32 PM** Prep Date: **3/15/05**
Client ID: Run ID: **ORGC8_050315C** SeqNo: **491193**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	0.3737	0.050	0.400	0	93.4%	75	124	0			
Benzene	0.05367	0.0050	0.0500	0	107%	80	128	0			
Toluene	0.05588	0.0050	0.0500	0	112%	85	126	0			
Ethylbenzene	0.05343	0.0050	0.0500	0	107%	80	126	0			
m,p-Xylene	0.1049	0.0050	0.100	0	105%	84	130	0			
o-Xylene	0.05239	0.0050	0.0500	0	105%	84	125	0			
Cis-1,2-Dichloroethylene	1.01	0.10	1.00	0	101%	72	135	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503177
Project:

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-13166** Batch ID: **13166** Test Code: **BTXES** Units: **µg/g** Analysis Date: **3/16/05 8:21:01 PM** Prep Date: **3/15/05**
Client ID: Run ID: **ORGC8_050315C** SeqNo: **491203**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	0.3503	0.050	0.400	0	87.6%	75	124	0.374	6.46%	15	
Benzene	0.05057	0.0050	0.0500	0	101%	80	128	0.0537	5.95%	15	
Toluene	0.05223	0.0050	0.0500	0	104%	85	126	0.0559	6.75%	15	
Ethylbenzene	0.05135	0.0050	0.0500	0	103%	80	126	0.0534	3.98%	15	
m,p-Xylene	0.09995	0.0050	0.100	0	100%	84	130	0.105	4.86%	15	
o-Xylene	0.04941	0.0050	0.0500	0	98.8%	84	125	0.0524	5.87%	15	
Cis-1,2-Dichloroethylene	0.984	0.10	1.00	0	98.4%	72	135	1.01	2.59%	15	

Sample ID: **LCS-13166** Batch ID: **13166** Test Code: **TPHCGS** Units: **µg/g** Analysis Date: **3/16/05 2:32:08 PM** Prep Date: **3/15/05**
Client ID: Run ID: **ORGC8_050315B** SeqNo: **490862**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gas (C6-C14)	10.50	1.0	10.0	0	105%	94	140	0			

Sample ID: **LCSD-13166-G** Batch ID: **13166** Test Code: **TPHCGS** Units: **µg/g** Analysis Date: **3/16/05 9:30:02 PM** Prep Date: **3/15/05**
Client ID: Run ID: **ORGC8_050315B** SeqNo: **490870**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gas (C6-C14)	10.66	1.0	10.0	0	107%	94	140	10.5	1.53%	15	

Sample ID: **LCS-13141** Batch ID: **13141** Test Code: **TPHDMS** Units: **µg/g** Analysis Date: **3/15/05 10:13:36 AM** Prep Date: **3/10/05**
Client ID: Run ID: **ORGC7_050315A** SeqNo: **490152**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	9.648	1.0	10.0	0	96.5%	85	153	0			
TPHC Motor Oil	21.73	10	20.0	0	109%	76	133	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503177
Project:

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-13141** Batch ID: **13141** Test Code: **TPHDMS** Units: **µg/g** Analysis Date: **3/15/05 10:32:09 AM** Prep Date: **3/10/05**
Client ID: Run ID: **ORGC7_050315A** SeqNo: **490153**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	9.720	1.0	10.0	0	97.2%	85	153	9.65	0.749%	15	
TPHC Motor Oil	21.80	10	20.0	0	109%	76	133	21.7	0.326%	15	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER: 0503177

Attention: BOB VOGT
Results & Invoice to: PALCO
Address: PO BOX 37
SCOTIA, CA
Phone:
Copies of Report to: ROLAND RUCKER
@ SHN
Sampler (Sign & Print): [signature]

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:__/__/__
Final Report: FAX ☐ Verbal ☐ By:__/__/__

PROJECT INFORMATION
Project Number:
Project Name:
Purchase Order Number:

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	CONTAINER	PRESERVATIVE	ANALYSIS: TPHD/M8	ANALYSIS: TPHG/BTEX 8021B
	MW-7 @7.5'	3-4-05	1250	S	1		X	X

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

cool, intact

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
[signature]		[signature]	3-7-05 1225

SAMPLE DISPOSAL
☒ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus (Hand)

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific
E-mail to:samplereceiving@airtoxics.com

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0503563

Work Order Summary

CLIENT:	Ms. Loretta Tomlin North Coast Laboratories 5680 West End Road Arcata, CA 95521	**BILL TO:**	Ms. Loretta Tomlin North Coast Laboratories 5680 West End Road Arcata, CA 95521
PHONE:	707-822-4649 ext 101	**P.O. #**	
FAX:	707-822-6831	**PROJECT #**	
DATE RECEIVED:	03/29/2005	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	04/01/2005		

FRACTION #	NAME	TEST
01A	0503582-1A	Mod. RSK-175
02A	Lab Blank	Mod. RSK-175
03A	LCS	Mod. RSK-175

CERTIFIED BY: Linda D. Frumarc DATE: 04/11/05

Laboratory Director

Certfication numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified RSK 175
North Coast Laboratories
Workorder# 0503563

One VOA Vial-40 mL sample was received on March 29, 2005. The laboratory performed analysis via Modified RSK 175 for Methane using GC/FID. The method involves placing an aliquot of the sample in a headspace vial. The vial is then placed into HP7694 Headspace Autosampler equipped with oven, shaker and 1 mL sample loop. Sample is incubated and then equilibrated at 40°C for 15 minutes with high agitation. Finally, a direct injection of the headspace is performed. See the data sheets for the reporting limits for each compound.

Requirement	*RSK 175*	*ATL Modifications*
Sample Collection	Collect sample in 60 mL crimp-top vial.	Collect sample in 40 mL VOA vial.
Headspace Generation	Headspace is generated in 60 mL sample vial by displacing volume of liquid with Helium. The amount of liquid should be 10% of sample volume in bottle, up to 10 mL.	5.0 mL of sample is displaced with 5.0 mL Nitrogen and transferred to a Nitrogen purged and capped autosampler vial. Headspace is then generated in the autosampler vial.
Sample Preparation	Sample is shaken 5 min. to equilibrate analyte between headspace and liquid phase.	Prior to injection, autosampler shakes sample for 15 min. while heating to 40°C.
Headspace Injection	Syringe injection of 300 mL headspace into GC.	Autosampler pressurizes sample to fill 1.0 mL loop with headspace sample.
Calibration and Quantitation	Direct injections of gas phase standards are used to obtain a Calibration Curve. Henry's Law is used to calculate mg of gas per Liter of water. Calculation requires recording total volume of serum bottle and headspace, and sample temperature.	Calibration standards are prepared by addition of a gaseous spike solution to clean water. Response factors are calculated for each level of a multi point calibration, and the mean is used to calculate quantitation for each target analyte.
Initial Calibration Curve (ICAL)	Linear regression	% RSD </= 30%, use average RF to quantify results
Lab Blanks	Blank subtraction is performed.	No blank subtraction; Lab Blank must be less than the Reporting Limit.
Specified Detectors	FID or ECD	FID or TCD

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 0503582-1A

ID#: 0503563-01A

MODIFIED METHOD RSK-175 GC/FID

File Name:	7033019	Date of Collection: 3/24/05	
Dil. Factor:	1.00	Date of Analysis: 3/30/05 10:18 PM	

Compound	Rpt. Limit (ug/ml)	Amount (ug/ml)
Methane	0.010	2.7

Container Type: VOA Vial-40 mL

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0503563-02A

MODIFIED METHOD RSK-175 GC/FID

File Name:	7033010	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 3/30/05 07:06 PM	

Compound	Rpt. Limit (ug/ml)	Amount (ug/ml)
Methane	0.010	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0503563-03A

MODIFIED METHOD RSK-175 GC/FID

File Name:	7033009	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 3/30/05 06:45 PM	

Compound	%Recovery
Methane	75

Container Type: NA - Not Applicable

NORTH COAST LABORATORIES LTD.

Sub-Contract
Chain of Custody Record

0503563

Date Shipped: 3/28/05 Carrier: Airborne

Air Bill #: UPS 1Z491 18203 4190 2579 Cooler #: NA

Subcontractor:	Air Toxics Lab 180 Blue Ravine Rd., Ste. B Folsom, CA 95630
Phone:	9169851000
Attention Line:	Sample Receiving
Send Results to:	North Coast Labs 5680 West End Road Arcata, CA 95521 Attn: Loretta Tomlin (707) 822-4649

Relinquished By: (signature)	Date/Time 3/28/05 1500	Received By: (signature) Laura Thomas ATL	Date/Time 3/29/05 1025
Relinquished By: (signature)	Date/Time	Received By: (signature)	Date/Time
Relinquished By: (signature)	Date/Time	Received By: (signature)	Date/Time

Analysis Request

	NCL Sample #:	Sample ID:	Date Sampled:	Analysis / Matrix:
01A	0503582-1A	MW-7	3/24/05 8:30:00 AM	DISSOLVED METHANE-GW

CUSTODY SEAL INTACT? Y N NONE TEMP 6.0°C

Special Instructions: Please include QC Data..PLEASE PROVIDE GEOTRACKER DELIVERABLE--GLOBALID#T0602300204

Date Due: 4/7/05 Rush Charges Authorized: NO Preservative: HCl

Return Chain of Custody to NCL

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

0503582

LABORATORY NUMBER:

Attention: Bob Vogt
Results & Invoice to: PALCO
Address: P.O. Box 37
Scotia CA
Phone: 764-4268
Copies of Report to: SHN Martin E. Lay
312 W. Wabash Ave. Eureka CA 95501-2138
Sampler (Sign & Print): [redacted] Dan J R. Pain

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☒ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☐ Verbal ☐ By:__/__/__
Final Report: FAX ☐ Verbal ☐ By:__/__/__

PROJECT INFORMATION
Project Number: 080097.120
Project Name: PALCO Company Garage
Purchase Order Number: ~~M-57574~~ M7007

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	PRESERVATIVE	CONTAINER	ANALYSIS: 8260 list 1	TPHD	8260 list 7	Dissolved Methane	COD and Ammonia	Nitrogen + TPOY	TDS, NO3, SO4, Alk	Diss Calc 17 metals	Mn and Fe	TPHD / MO
	MW-6	3/23/05	1120	GW	b	9	X	X								
	MW-2		1245			14	X	X								
	MW-5		1400		b	9	X	X								
	MW-1		1410		b	9	X	X								
	MW-3		1600		c	6	X	X								
	MW-4		1630		c	6	X	X								
	MW-7	~~3/24/05~~	0820			3			X	X	X	X	X	X	X	
						3										
						14										

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

Global ID #
T0602300204

EDF

Cooler temp= 12.3°C

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
Dan J R. Pain David R. Pain	~~3/24/05~~ 3/24/05	DK. Thompson	3/24/05 0975

SAMPLE DISPOSAL
☒ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

MATRIX: DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

NORTH COAST LABORATORIES LTD.

April 13, 2005

Pacific Lumber-M
P.O. Box 37
125 Main St
Scotia, CA 95565-0037
Attn: Bob Vogt / Environmental Service

Order No.: 0503534
Invoice No.: 49320
PO No.: M7007
ELAP No. 1247-Expires July 2006

RE: 089097.120, PALCO Company Garage

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	MW-6
01D	MW-6
02A	MW-2
02D	MW-2
03A	MW-5
03D	MW-5
04A	MW-1
04D	MW-1
05A	MW-3
05D	MW-3
06A	MW-4
06D	MW-4
07A	MW-7
07D	MW-7
07E	MW-7
07F	MW-7
07G	MW-7 (Dissolved)
07H	MW-7

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

REPORT CERTIFIED BY

Laboratory Supervisor(s)

QA Unit

Jesse G. Chaney, Jr.
Laboratory Director

CLIENT: Pacific Lumber-M
Project: 089097.120, PALCO Company Garage
Lab Order: 0503534

CASE NARRATIVE

TPH as Diesel:
Samples MW-1, MW-3, MW-4 contain some material lighter than diesel. However, some of this material extends into the diesel range of molecular weights. These samples also contain material in the diesel range of molecular weights, but the material does not exhibit the peak pattern typical of diesel oil.

TPH as Diesel/Motor Oil:
Sample MW-7 contains some material lighter than diesel. However, some of this material extends into the diesel range of molecular weights. This sample also contains material in the diesel range of molecular weights, but the material does not exhibit the peak pattern typical of diesel oil.

Gasoline Components/Additives:
Samples MW-1, MW-3 and MW-4 appear to be similar to gasoline but certain peak ratios are not that of a fresh gasoline standard. The reported results represent the amount of material in the gasoline range.

Some reporting limits were raised for sample MW-4 due to matrix interference.

Sample MW-3 was reported as ND with a dilution due to matrix interference.

The surrogate recovery for sample MW-4 was outside of the acceptance limits. The surrogate recoveries for the quality control samples were within the acceptance limits. This indicates that the low surrogate recovery may be due to matrix effects from the sample.

EPA 8260B:
Sample MW-7 appears to be similar to gasoline but certain peak ratios are not that of a fresh gasoline standard. The reported result represents the amount of material in the gasoline range.

Some reporting limits were raised for sample MW-7 due to matrix interference.

The dibromofluoromethane surrogate recovery for sample MW-7 was below the lower acceptance limit. The three other surrogate recoveries were within the acceptance limits; therefore, the data were accepted.

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were above the upper acceptance limits for several analytes and the 1,4-dichlorobenzene surrogate. These recoveries indicate that the sample results may be erroneously high. There were no detectable levels of these analytes in the sample with the exception of m,p-xylene which was slightly above the upper acceptance limit in the LCSD. The LCS recovery for m,p-xylene was within the acceptance limits; therefore, the data were accepted.

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The LCS recovery was below the lower acceptance limit for bromomethane. The LCSD recovery was within the acceptance limits; therefore, the data were accepted.

The relative percent difference's (RPD's) for the laboratory control samples were above the upper acceptance limits for bromomethane and 2,2-dichloropropane. This indicates that the results could be variable. Since there were no detectable levels of the analytes in the sample, the data were accepted.

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Date: 13-Apr-05
WorkOrder: 0503534

ANALYTICAL REPORT

Client Sample ID: MW-6 **Received:** 3/24/05 **Collected:** 3/23/05 11:20
Lab ID: 0503534-01A

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		4/1/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		4/1/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		4/1/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		4/1/05
Benzene	ND	0.50	µg/L	1.0		4/1/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		4/1/05
Toluene	ND	0.50	µg/L	1.0		4/1/05
Ethylbenzene	ND	0.50	µg/L	1.0		4/1/05
m,p-Xylene	ND	0.50	µg/L	1.0		4/1/05
o-Xylene	ND	0.50	µg/L	1.0		4/1/05
Surrogate: 1,4-Dichlorobenzene-d4	84.2	80.8-139	% Rec	1.0		4/1/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		4/1/05

Client Sample ID: MW-6 **Received:** 3/24/05 **Collected:** 3/23/05 11:20
Lab ID: 0503534-01D

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	4/4/05	4/5/05
Surrogate: N-Tricosane	120	70-130	% Rec	1.0	4/4/05	4/5/05

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Date: 13-Apr-05
WorkOrder: 0503534

ANALYTICAL REPORT

Client Sample ID: MW-2 **Received:** 3/24/05 **Collected:** 3/23/05 12:45
Lab ID: 0503534-02A

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		4/1/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		4/1/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		4/1/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		4/1/05
Benzene	ND	0.50	µg/L	1.0		4/1/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		4/1/05
Toluene	ND	0.50	µg/L	1.0		4/1/05
Ethylbenzene	ND	0.50	µg/L	1.0		4/1/05
m,p-Xylene	ND	0.50	µg/L	1.0		4/1/05
o-Xylene	ND	0.50	µg/L	1.0		4/1/05
Surrogate: 1,4-Dichlorobenzene-d4	86.1	80.8-139	% Rec	1.0		4/1/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		4/1/05

Client Sample ID: MW-2 **Received:** 3/24/05 **Collected:** 3/23/05 12:45
Lab ID: 0503534-02D

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	4/4/05	4/5/05
Surrogate: N-Tricosane	99.2	70-130	% Rec	1.0	4/4/05	4/5/05

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Date: 13-Apr-05
WorkOrder: 0503534

ANALYTICAL REPORT

Client Sample ID: MW-5 **Received:** 3/24/05 **Collected:** 3/23/05 14:00
Lab ID: 0503534-03A

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		4/1/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		4/1/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		4/1/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		4/1/05
Benzene	ND	0.50	µg/L	1.0		4/1/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		4/1/05
Toluene	ND	0.50	µg/L	1.0		4/1/05
Ethylbenzene	ND	0.50	µg/L	1.0		4/1/05
m,p-Xylene	ND	0.50	µg/L	1.0		4/1/05
o-Xylene	ND	0.50	µg/L	1.0		4/1/05
Surrogate: 1,4-Dichlorobenzene-d4	81.8	80.8-139	% Rec	1.0		4/1/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		4/1/05

Client Sample ID: MW-5 **Received:** 3/24/05 **Collected:** 3/23/05 14:00
Lab ID: 0503534-03D

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	4/4/05	4/5/05
Surrogate: N-Tricosane	101	70-130	% Rec	1.0	4/4/05	4/5/05

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Date: 13-Apr-05
WorkOrder: 0503534

ANALYTICAL REPORT

Client Sample ID: MW-1 **Received:** 3/24/05 **Collected:** 3/23/05 14:10
Lab ID: 0503534-04A

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		4/1/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		4/1/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		4/1/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		4/1/05
Benzene	13	0.50	µg/L	1.0		4/1/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		4/1/05
Toluene	4.8	0.50	µg/L	1.0		4/1/05
Ethylbenzene	13	0.50	µg/L	1.0		4/1/05
m,p-Xylene	5.5	0.50	µg/L	1.0		4/1/05
o-Xylene	1.1	0.50	µg/L	1.0		4/1/05
Surrogate: 1,4-Dichlorobenzene-d4	85.6	80.8-139	% Rec	1.0		4/1/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	3,700	50	µg/L	1.0		4/1/05

Client Sample ID: MW-1 **Received:** 3/24/05 **Collected:** 3/23/05 14:10
Lab ID: 0503534-04D

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	540	50	µg/L	1.0	4/4/05	4/5/05
Surrogate: N-Tricosane	108	70-130	% Rec	1.0	4/4/05	4/5/05

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Date: 13-Apr-05
WorkOrder: 0503534

ANALYTICAL REPORT

Client Sample ID: MW-3 **Received:** 3/24/05 **Collected:** 3/23/05 16:00
Lab ID: 0503534-05A

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	10	µg/L	10		4/4/05
Tert-butyl alcohol (TBA)	ND	100	µg/L	10		4/4/05
Di-isopropyl ether (DIPE)	ND	10	µg/L	10		4/4/05
Ethyl tert-butyl ether (ETBE)	ND	10	µg/L	10		4/4/05
Benzene	78	5.0	µg/L	10		4/4/05
Tert-amyl methyl ether (TAME)	ND	10	µg/L	10		4/4/05
Toluene	15	5.0	µg/L	10		4/4/05
Ethylbenzene	31	5.0	µg/L	10		4/4/05
m,p-Xylene	14	5.0	µg/L	10		4/4/05
o-Xylene	5.6	5.0	µg/L	10		4/4/05
Surrogate: 1,4-Dichlorobenzene-d4	95.6	80.8-139	% Rec	10		4/4/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	4,600	500	µg/L	10		4/4/05

Client Sample ID: MW-3 **Received:** 3/24/05 **Collected:** 3/23/05 16:00
Lab ID: 0503534-05D

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	550	50	µg/L	1.0	4/4/05	4/5/05
Surrogate: N-Tricosane	105	70-130	% Rec	1.0	4/4/05	4/5/05

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Date: 13-Apr-05
WorkOrder: 0503534

ANALYTICAL REPORT

Client Sample ID: MW-4 **Received:** 3/24/05 **Collected:** 3/23/05 16:20
Lab ID: 0503534-06A

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	8.0	µg/L	1.0		4/2/05
Tert-butyl alcohol (TBA)	ND	32	µg/L	1.0		4/2/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		4/2/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		4/2/05
Benzene	1,100	25	µg/L	50		4/1/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		4/2/05
Toluene	73	0.50	µg/L	1.0		4/2/05
Ethylbenzene	150	25	µg/L	50		4/1/05
m,p-Xylene	59	0.50	µg/L	1.0		4/2/05
o-Xylene	14	0.50	µg/L	1.0		4/2/05
Surrogate: 1,4-Dichlorobenzene-d4	79.9	80.8-139	% Rec	1.0		4/2/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	13,000	2,500	µg/L	50		4/1/05

Client Sample ID: MW-4 **Received:** 3/24/05 **Collected:** 3/23/05 16:20
Lab ID: 0503534-06D

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	900	50	µg/L	1.0	4/4/05	4/5/05
Surrogate: N-Tricosane	104	70-130	% Rec	1.0	4/4/05	4/5/05

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Date: 13-Apr-05
WorkOrder: 0503534

ANALYTICAL REPORT

Client Sample ID: MW-7 **Received:** 3/24/05 **Collected:** 3/24/05 8:20
Lab ID: 0503534-07A

Test Name: EPA 8260B **Reference:** EPA 5030B/8260B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Dichlorodifluoromethane	ND	1.0	µg/L	1.0		3/26/05
Chloromethane	ND	2.0	µg/L	1.0		3/26/05
Vinyl chloride	ND	1.0	µg/L	1.0		3/26/05
Bromomethane	ND	1.0	µg/L	1.0		3/26/05
Chloroethane	ND	1.0	µg/L	1.0		3/26/05
Trichlorofluoromethane	ND	1.0	µg/L	1.0		3/26/05
1,1-Dichloroethene	ND	1.0	µg/L	1.0		3/26/05
Methylene chloride	ND	2.0	µg/L	1.0		3/26/05
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		3/26/05
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		3/26/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		3/26/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		3/26/05
1,1-Dichloroethane	ND	1.0	µg/L	1.0		3/26/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		3/26/05
cis-1,2-Dichloroethene	ND	1.0	µg/L	1.0		3/26/05
2,2-Dichloropropane	ND	5.0	µg/L	1.0		3/26/05
Bromochloromethane	ND	1.0	µg/L	1.0		3/26/05
Chloroform	ND	1.0	µg/L	1.0		3/26/05
Carbon Tetrachloride	ND	1.0	µg/L	1.0		3/26/05
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		3/26/05
1,1-Dichloropropene	ND	1.0	µg/L	1.0		3/26/05
Benzene	3.5	0.50	µg/L	1.0		3/26/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		3/26/05
1,2-Dichloroethane	ND	1.0	µg/L	1.0		3/26/05
Trichloroethene	ND	1.0	µg/L	1.0		3/26/05
Dibromomethane	ND	1.0	µg/L	1.0		3/26/05
1,2-Dichloropropane	ND	1.0	µg/L	1.0		3/26/05
Bromodichloromethane	ND	1.0	µg/L	1.0		3/26/05
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		3/26/05
Toluene	2.6	0.50	µg/L	1.0		3/26/05
Tetrachloroethene	ND	1.0	µg/L	1.0		3/26/05
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		3/26/05
1,1,2-Trichloroethane	ND	11	µg/L	1.0		3/26/05
Dibromochloromethane	ND	1.0	µg/L	1.0		3/26/05
1,3-Dichloropropane	ND	1.0	µg/L	1.0		3/26/05
1,2-Dibromoethane (EDB)	ND	2.0	µg/L	1.0		3/26/05
Chlorobenzene	ND	1.0	µg/L	1.0		3/26/05
Ethylbenzene	2.0	0.50	µg/L	1.0		3/26/05
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1.0		3/26/05
m,p-Xylene	2.6	0.50	µg/L	1.0		3/26/05
o-Xylene	0.63	0.50	µg/L	1.0		3/26/05
Bromoform	ND	1.0	µg/L	1.0		3/26/05
Styrene	ND	1.0	µg/L	1.0		3/26/05

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Isopropylbenzene	7.9	1.0	µg/L	1.0	3/26/05
Bromobenzene	ND	1.0	µg/L	1.0	3/26/05
n-Propylbenzene	16	1.0	µg/L	1.0	3/26/05
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0	3/26/05
2-Chlorotoluene	ND	1.0	µg/L	1.0	3/26/05
4-Chlorotoluene	ND	1.0	µg/L	1.0	3/26/05
1,2,3-Trichloropropane	ND	2.0	µg/L	1.0	3/26/05
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1.0	3/26/05
tert-Butylbenzene	7.9	1.0	µg/L	1.0	3/26/05
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1.0	3/26/05
sec-Butylbenzene	ND	4.0	µg/L	1.0	3/26/05
4-Isopropyltoluene	ND	1.0	µg/L	1.0	3/26/05
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0	3/26/05
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0	3/26/05
n-Butylbenzene	2.9	1.0	µg/L	1.0	3/26/05
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0	3/26/05
1,2-Dibromo-3-chloropropane (DBCP)	ND	28	µg/L	1.0	3/26/05
1,2,4-Trichlorobenzene	ND	2.0	µg/L	1.0	3/26/05
Hexachlorobutadiene	ND	2.0	µg/L	1.0	3/26/05
Naphthalene	ND	2.0	µg/L	1.0	3/26/05
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1.0	3/26/05
Surrogate: 1,2-Dichloroethane-d4	104	80-120	% Rec	1.0	3/26/05
Surrogate: 1,4-Dichlorobenzene-d4	81.2	80-120	% Rec	1.0	3/26/05
Surrogate: Dibromofluoromethane	76.3	80-120	% Rec	1.0	3/26/05
Surrogate: Toluene-d8	98.7	80-120	% Rec	1.0	3/26/05

Test Name: TPH as Gasoline **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	1,500	50	µg/L	1.0		3/26/05

Client Sample ID: MW-7 **Received:** 3/24/05 **Collected:** 3/24/05 8:20

Lab ID: 0503534-07D

Test Name: Ammonia Nitrogen without distillation **Reference:** EPA 350.3

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Ammonia Nitrogen	1.5	0.20	mg/L	1.0		3/30/05

Test Name: Chemical Oxygen Demand **Reference:** EPA 410.4

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chemical Oxygen Demand	140	10	mg/L	2.0	3/30/05	3/30/05

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Date: 13-Apr-05
WorkOrder: 0503534

ANALYTICAL REPORT

Client Sample ID: MW-7 **Received:** 3/24/05 **Collected:** 3/24/05 8:20
Lab ID: 0503534-07E

Test Name: Nitrogen - Total Kjeldahl **Reference:** EPA 351.4

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Nitrogen- Total Kjeldahl	3.6	1.0	mg/L	1.0	4/7/05	4/12/05

Test Name: Total Nitrogen **Reference:** Std. Meth. 19th Ed. 4500-N

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Total Nitrogen	3.6	1.0	mg/L	1.0		4/13/05

Test Name: Total Phosphate Phosphorus **Reference:** EPA 365.2

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Total Phosphate Phosphorus	2.4	0.20	mg/L	10	4/5/05	4/5/05

Client Sample ID: MW-7 **Received:** 3/24/05 **Collected:** 3/24/05 8:20
Lab ID: 0503534-07F

Test Name: Alkalinity **Reference:** Std. Meth. 19th Ed. 2320 B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Alkalinity	400	1.0	mg/L CaCO3	1.0		4/5/05

Test Name: Chloride, sulfate, fluoride, bromide **Reference:** EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Sulfate	2.1	0.50	mg/L	1.0		3/25/05

Test Name: Nitrate/Nitrite **Reference:** EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Nitrate (as Nitrogen)	ND	0.10	mg/L	1.0		3/25/05
Nitrite (as Nitrogen)	ND	0.10	mg/L	1.0		3/25/05

Test Name: Total Dissolved Solids **Reference:** EPA 160.1

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Total Dissolved Solids	510	10	mg/L	1.0		3/29/05

Client Sample ID: MW-7 (Dissolved) **Received:** 3/24/05 **Collected:** 3/24/05 8:20
Lab ID: 0503534-07G

Test Name: Arsenic **Reference:** EPA 200.9

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Arsenic	40	30	µg/L	3.0	3/24/05	4/6/05

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Date: 13-Apr-05

ANALYTICAL REPORT

WorkOrder: 0503534

Test Name: ICAP Metals with Acid Digestion — Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Antimony	ND	50	µg/L	1.0	3/24/05	4/5/05
Barium	14	5.0	µg/L	1.0	3/24/05	4/5/05
Beryllium	ND	1.0	µg/L	1.0	3/24/05	4/5/05
Cadmium	ND	10	µg/L	1.0	3/24/05	4/5/05
Chromium	ND	10	µg/L	1.0	3/24/05	4/5/05
Cobalt	ND	10	µg/L	1.0	3/24/05	4/5/05
Copper	ND	10	µg/L	1.0	3/24/05	4/5/05
Iron	7,600	100	µg/L	1.0	3/24/05	4/5/05
Manganese	3,500	2.0	µg/L	1.0	3/24/05	4/5/05
Molybdenum	30	20	µg/L	1.0	3/24/05	4/5/05
Nickel	ND	20	µg/L	1.0	3/24/05	4/5/05
Silver	ND	10	µg/L	1.0	3/24/05	4/5/05
Vanadium	ND	10	µg/L	1.0	3/24/05	4/5/05
Zinc	ND	20	µg/L	1.0	3/24/05	4/5/05

Test Name: Lead — Reference: EPA 200.9

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Lead	ND	10	µg/L	1.0	3/24/05	3/25/05

Test Name: Mercury — Reference: EPA 245.1

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Mercury	ND	1.0	µg/L	1.0	3/25/05	3/30/05

Test Name: Selenium — Reference: EPA 200.9

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Selenium	ND	10	µg/L	1.0	3/24/05	3/28/05

Test Name: Thallium — Reference: EPA 200.9

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Thallium	ND	10	µg/L	1.0	3/24/05	4/4/05

Client Sample ID: MW-7 — Received: 3/24/05 — Collected: 3/24/05 8:20

Lab ID: 0503534-07H

Test Name: TPH as Diesel/Motor Oil — Reference: EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	200	50	µg/L	1.0	3/28/05	3/29/05
TPHC Motor Oil	ND	170	µg/L	1.0	3/28/05	3/29/05

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North Coast Laboratories, Ltd.

Date: 13-Apr-05

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Method Blank

Sample ID: **MB 040105** Batch ID: **R34187** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **4/1/05 6:50:00 AM** Prep Date:

Client ID: Run ID: **ORGCMS2_050401A** SeqNo: **494553**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0									
Tert-butyl alcohol (TBA)	ND	10									
Di-isopropyl ether (DIPE)	ND	1.0									
Ethyl tert-butyl ether (ETBE)	ND	1.0									
Benzene	0.1229	0.50									J
Tert-amyl methyl ether (TAME)	ND	1.0									
Toluene	ND	0.50									
Ethylbenzene	0.08233	0.50									J
m,p-Xylene	ND	0.50									
o-Xylene	ND	0.50									
1,4-Dichlorobenzene-d4	0.827	0.10	1.00	0	82.7%	81	139	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Method Blank

Sample ID: **MB 032505** Batch ID: **R34064** Test Code: **8260W** Units: **µg/L** Analysis Date: **3/25/05 7:59:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS2_050325A** SeqNo: **492941**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	1.0									
Chloromethane	0.09179	2.0									J
Vinyl chloride	ND	1.0									
Bromomethane	ND	1.0									
Chloroethane	ND	1.0									
Trichlorofluoromethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
Methylene chloride	ND	2.0									
trans-1,2-Dichloroethene	ND	1.0									
Methyl tert-butyl ether (MTBE)	ND	1.0									
Tert-butyl alcohol (TBA)	ND	10									
Di-isopropyl ether (DIPE)	0.2414	1.0									J
1,1-Dichloroethane	ND	1.0									
Ethyl tert-butyl ether (ETBE)	0.2158	1.0									J
cis-1,2-Dichloroethene	ND	1.0									
2,2-Dichloropropane	ND	1.0									
Bromochloromethane	ND	1.0									
Chloroform	ND	1.0									
Carbon Tetrachloride	ND	1.0									
1,1,1-Trichloroethane	ND	1.0									
1,1-Dichloropropene	0.1713	1.0									J
Benzene	0.1135	0.50									J
Tert-amyl methyl ether (TAME)	0.3484	1.0									J
1,2-Dichloroethane	ND	1.0									
Trichloroethene	ND	1.0									
Dibromomethane	ND	1.0									
1,2-Dichloropropane	ND	1.0									
Bromodichloromethane	0.1792	1.0									J
cis-1,3-Dichloropropene	ND	1.0									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Method Blank

Toluene	0.1699	0.50	J
Tetrachloroethene	ND	1.0	
trans-1,3-Dichloropropene	ND	1.0	
1,1,2-Trichloroethane	ND	1.0	
Dibromochloromethane	ND	1.0	
1,3-Dichloropropane	ND	1.0	
1,2-Dibromoethane (EDB)	ND	2.0	
Chlorobenzene	0.1231	1.0	J
Ethylbenzene	0.1560	0.50	J
1,1,1,2-Tetrachloroethane	ND	1.0	
m,p-Xylene	ND	0.50	
o-Xylene	ND	0.50	
Bromoform	0.4317	1.0	J
Styrene	ND	1.0	
Isopropylbenzene	ND	1.0	
Bromobenzene	ND	1.0	
n-Propylbenzene	0.2016	1.0	J
1,1,2,2-Tetrachloroethane	ND	1.0	
2-Chlorotoluene	0.2013	1.0	J
4-Chlorotoluene	0.1729	1.0	J
1,2,3-Trichloropropane	ND	2.0	
1,3,5-Trimethylbenzene	0.2866	1.0	J
tert-Butylbenzene	0.2601	1.0	J
1,2,4-Trimethylbenzene	0.2622	1.0	J
sec-Butylbenzene	0.2511	1.0	J
4-Isopropyltoluene	ND	1.0	
1,3-Dichlorobenzene	ND	1.0	
1,4-Dichlorobenzene	ND	1.0	
n-Butylbenzene	0.3521	1.0	J
1,2-Dichlorobenzene	ND	1.0	
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	
1,2,4-Trichlorobenzene	ND	2.0	
Hexachlorobutadiene	ND	2.0	
Naphthalene	0.5840	2.0	J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Method Blank

1,2,3-Trichlorobenzene	ND	2.0							
1,2-Dichloroethane-d4	0.981	0.10	1.00	0	98.1%	80	120	0	
1,4-Dichlorobenzene-d4	0.894	0.10	1.00	0	89.4%	80	120	0	
Dibromofluoromethane	1.03	0.10	1.00	0	103%	80	120	0	
Toluene-d8	0.976	0.10	1.00	0	97.6%	80	120	0	

Sample ID: **MBLK** Batch ID: **R34132** Test Code: **AMMW** Units: **mg/L** Analysis Date: **3/30/05** Prep Date:
Client ID: Run ID: **WC_050330H** SeqNo: **493932**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	ND	0.20									

Sample ID: **MB-13219A** Batch ID: **13219** Test Code: **AS200.9X** Units: **µg/L** Analysis Date: **4/6/05 3:55:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INAA2_050407A** SeqNo: **496545**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	10									

Sample ID: **MBLK** Batch ID: **R34124** Test Code: **CODW** Units: **mg/L** Analysis Date: **3/30/05** Prep Date: **3/30/05**
Client ID: Run ID: **WC_050330E** SeqNo: **493802**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chemical Oxygen Demand	ND	5.0									

Sample ID: **MB 032505** Batch ID: **R34070** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **3/25/05 7:59:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS2_050325B** SeqNo: **493015**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	23.99	50									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Method Blank

Sample ID: **MB 040105** Batch ID: **R34188** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **4/1/05 6:50:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS2_050401B** SeqNo: **494580**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	24.80	50									J

Sample ID: **MBLK 032505** Batch ID: **R34069** Test Code: **ICIONW** Units: **mg/L** Analysis Date: **3/25/05 2:59:09 PM** Prep Date:
Client ID: Run ID: **INIC2_050325B** SeqNo: **493002**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									J

Sample ID: **MBLK 032505** Batch ID: **R34067** Test Code: **ICNOW** Units: **mg/L** Analysis Date: **3/25/05 2:59:09 PM** Prep Date:
Client ID: Run ID: **INIC2_050325A** SeqNo: **492984**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as Nitrogen)	ND	0.10									
Nitrite (as Nitrogen)	ND	0.10									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-13219P** Batch ID: **13219** Test Code: **ICPX** Units: **µg/L** Analysis Date: **4/5/05 3:38:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INICP1_050405B** SeqNo: **496109**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	50									
Barium	ND	5.0									
Beryllium	0.4600	1.0									J
Cadmium	2.240	10									J
Chromium	2.290	10									J
Cobalt	2.030	10									J
Copper	ND	10									
Iron	ND	100									
Manganese	ND	2.0									
Molybdenum	6.130	20									J
Nickel	ND	20									
Silver	ND	10									
Vanadium	2.450	10									J
Zinc	6.900	20									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-13219P** Batch ID: **13219** Test Code: **ICPX** Units: **µg/L** Analysis Date: **4/8/05 3:05:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INICP1_050408A** SeqNo: **497258**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	50									
Barium	ND	5.0									
Beryllium	ND	1.0									
Cadmium	ND	10									
Chromium	ND	10									
Cobalt	1.560	10									J
Copper	ND	10									
Iron	ND	100									
Manganese	ND	2.0									
Molybdenum	ND	20									
Nickel	ND	20									
Silver	ND	10									
Vanadium	ND	10									
Zinc	5.870	20									J

Sample ID: **MB-13223** Batch ID: **13223** Test Code: **MERCW** Units: **µg/L** Analysis Date: **3/30/05** Prep Date: **3/25/05**
Client ID: Run ID: **CVAA1_050330A** SeqNo: **493829**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	1.0									

Sample ID: **MBLK 4-7-05** Batch ID: **R34338** Test Code: **NKJEW** Units: **mg/L** Analysis Date: **4/12/05** Prep Date: **4/7/05**
Client ID: Run ID: **WC_050412D** SeqNo: **497769**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen- Total Kjeldahl	0.2300	1.0									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Method Blank

Sample ID: **MBLK 4-11-05** Batch ID: **R34338** Test Code: **NKJEW** Units: **mg/L** Analysis Date: **4/12/05** Prep Date: **4/11/05**
Client ID: Run ID: **WC_050412D** SeqNo: **497773**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen- Total Kjeldahl	0.3200	1.0									J

Sample ID: **MB-13219A** Batch ID: **13219** Test Code: **PB200.9X** Units: **µg/L** Analysis Date: **3/25/05 5:43:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INAA2_050325A** SeqNo: **492794**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	10									

Sample ID: **MBLK** Batch ID: **R34207** Test Code: **PO4TOW** Units: **mg/L** Analysis Date: **4/5/05** Prep Date: **4/5/05**
Client ID: Run ID: **WC_050405C** SeqNo: **494812**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Phosphate Phosphorus	ND	0.020									

Sample ID: **MB-13219A** Batch ID: **13219** Test Code: **SE200.9X** Units: **µg/L** Analysis Date: **3/28/05 6:38:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INAA2_050328A** SeqNo: **493198**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	10									

Sample ID: **MBLK** Batch ID: **R34144** Test Code: **TDS** Units: **mg/L** Analysis Date: **3/29/05** Prep Date:
Client ID: Run ID: **WC_050331D** SeqNo: **494084**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	10									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-13219A** Batch ID: **13219** Test Code: **TL200.9X** Units: **µg/L** Analysis Date: **4/4/05 2:53:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INAA2_050404B** SeqNo: **494704**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	ND	10									

Sample ID: **MB-13268** Batch ID: **13268** Test Code: **TPHDIW** Units: **µg/L** Analysis Date: **4/5/05 1:56:12 PM** Prep Date: **4/4/05**
Client ID: Run ID: **ORGC7_050405A** SeqNo: **496433**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	ND	50									
N-Tricosane	54.5	0.10	50.0	0	109%	70	130	0			

Sample ID: **MB-13230** Batch ID: **13230** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **3/29/05 12:01:16 PM** Prep Date: **3/28/05**
Client ID: Run ID: **ORGC7_050329A** SeqNo: **494635**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	18.94	50									J
TPHC Motor Oil	ND	170									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

North Coast Laboratories, Ltd.

Date: 13-Apr-05

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-05220** Batch ID: **R34187** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **4/1/05 2:49:00 AM** Prep Date:

Client ID: Run ID: **ORGCMS2_050401A** SeqNo: **494550**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21.38	1.0	20.0	0	107%	80	120	0			
Tert-butyl alcohol (TBA)	625.7	10	400	0	156%	25	162	0			
Di-isopropyl ether (DIPE)	21.08	1.0	20.0	0	105%	80	120	0			
Ethyl tert-butyl ether (ETBE)	19.92	1.0	20.0	0	99.6%	77	120	0			
Benzene	22.79	0.50	20.0	0	114%	78	117	0			
Tert-amyl methyl ether (TAME)	20.37	1.0	20.0	0	102%	64	136	0			
Toluene	20.56	0.50	20.0	0	103%	80	120	0			
Ethylbenzene	21.56	0.50	20.0	0	108%	80	120	0			
m,p-Xylene	43.57	0.50	40.0	0	109%	80	120	0			
o-Xylene	19.62	0.50	20.0	0	98.1%	80	120	0			
1,4-Dichlorobenzene-d4	1.25	0.10	1.00	0	125%	81	139	0			

Sample ID: **LCSD-05220** Batch ID: **R34187** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **4/1/05 3:20:00 AM** Prep Date:

Client ID: Run ID: **ORGCMS2_050401A** SeqNo: **494551**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	20.49	1.0	20.0	0	102%	80	120	21.4	4.28%	20	
Tert-butyl alcohol (TBA)	547.4	10	400	0	137%	25	162	626	13.4%	20	
Di-isopropyl ether (DIPE)	20.45	1.0	20.0	0	102%	80	120	21.1	3.04%	20	
Ethyl tert-butyl ether (ETBE)	19.30	1.0	20.0	0	96.5%	77	120	19.9	3.16%	20	
Benzene	21.66	0.50	20.0	0	108%	78	117	22.8	5.07%	20	
Tert-amyl methyl ether (TAME)	19.93	1.0	20.0	0	99.7%	64	136	20.4	2.14%	20	
Toluene	19.90	0.50	20.0	0	99.5%	80	120	20.6	3.23%	20	
Ethylbenzene	20.31	0.50	20.0	0	102%	80	120	21.6	5.95%	20	
m,p-Xylene	41.66	0.50	40.0	0	104%	80	120	43.6	4.48%	20	
o-Xylene	19.16	0.50	20.0	0	95.8%	80	120	19.6	2.36%	20	
1,4-Dichlorobenzene-d4	1.25	0.10	1.00	0	125%	81	139	1.25	0.0841%	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: **LCS-05200** Batch ID: **R34064** Test Code: **8260W** Units: **µg/L** Analysis Date: **3/25/05 3:59:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS2_050325A** SeqNo: **492938**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	18.88	1.0	20.0	0	94.4%	80	120	0			
Chloromethane	21.06	2.0	20.0	0	105%	80	120	0			
Vinyl chloride	24.02	1.0	20.0	0	120%	80	120	0			S
Bromomethane	14.44	1.0	20.0	0	72.2%	80	120	0			S
Chloroethane	23.55	1.0	20.0	0	118%	80	120	0			
Trichlorofluoromethane	19.91	1.0	20.0	0	99.5%	80	120	0			
1,1-Dichloroethene	27.06	1.0	20.0	0	135%	80	120	0			S
Methylene chloride	24.89	2.0	20.0	0	124%	80	120	0			S
trans-1,2-Dichloroethene	23.41	1.0	20.0	0	117%	80	120	0			
Methyl tert-butyl ether (MTBE)	21.09	1.0	20.0	0	105%	80	120	0			
Tert-butyl alcohol (TBA)	569.3	10	400	0	142%	80	120	0			S
Di-isopropyl ether (DIPE)	20.77	1.0	20.0	0	104%	80	120	0			
1,1-Dichloroethane	24.03	1.0	20.0	0	120%	80	120	0			S
Ethyl tert-butyl ether (ETBE)	20.56	1.0	20.0	0	103%	80	120	0			
cis-1,2-Dichloroethene	21.52	1.0	20.0	0	108%	80	120	0			
2,2-Dichloropropane	25.52	1.0	20.0	0	128%	80	120	0			S
Bromochloromethane	22.42	1.0	20.0	0	112%	80	120	0			
Chloroform	23.02	1.0	20.0	0	115%	80	120	0			
Carbon Tetrachloride	22.46	1.0	20.0	0	112%	80	120	0			
1,1,1-Trichloroethane	23.02	1.0	20.0	0	115%	80	120	0			
1,1-Dichloropropene	20.66	1.0	20.0	0	103%	80	120	0			
Benzene	21.79	0.50	20.0	0	109%	80	120	0			
Tert-amyl methyl ether (TAME)	18.35	1.0	20.0	0	91.8%	80	120	0			
1,2-Dichloroethane	21.92	1.0	20.0	0	110%	80	120	0			
Trichloroethene	21.27	1.0	20.0	0	106%	80	120	0			
Dibromomethane	21.22	1.0	20.0	0	106%	80	120	0			
1,2-Dichloropropane	22.19	1.0	20.0	0	111%	80	120	0			
Bromodichloromethane	20.19	1.0	20.0	0	101%	80	120	0			
cis-1,3-Dichloropropene	20.12	1.0	20.0	0	101%	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT

Laboratory Control Spike

Toluene	20.48	0.50	20.0	0	102%	80	120	0	
Tetrachloroethene	21.09	1.0	20.0	0	105%	80	120	0	
trans-1,3-Dichloropropene	19.43	1.0	20.0	0	97.2%	80	120	0	
1,1,2-Trichloroethane	20.56	1.0	20.0	0	103%	80	120	0	
Dibromochloromethane	19.98	1.0	20.0	0	99.9%	80	120	0	
1,3-Dichloropropane	20.77	1.0	20.0	0	104%	80	120	0	
1,2-Dibromoethane (EDB)	19.23	2.0	20.0	0	96.1%	80	120	0	
Chlorobenzene	20.10	1.0	20.0	0	101%	80	120	0	
Ethylbenzene	19.60	0.50	20.0	0	98.0%	80	120	0	
1,1,1,2-Tetrachloroethane	19.09	1.0	20.0	0	95.4%	80	120	0	
m,p-Xylene	43.57	0.50	40.0	0	109%	80	120	0	
o-Xylene	20.80	0.50	20.0	0	104%	80	120	0	
Bromoform	22.73	1.0	20.0	0	114%	80	120	0	
Styrene	20.55	1.0	20.0	0	103%	80	120	0	
Isopropylbenzene	21.00	1.0	20.0	0	105%	80	120	0	
Bromobenzene	20.33	1.0	20.0	0	102%	80	120	0	
n-Propylbenzene	22.93	1.0	20.0	0	115%	80	120	0	
1,1,2,2-Tetrachloroethane	22.45	1.0	20.0	0	112%	80	120	0	
2-Chlorotoluene	22.18	1.0	20.0	0	111%	80	120	0	
4-Chlorotoluene	22.94	1.0	20.0	0	115%	80	120	0	
1,2,3-Trichloropropane	23.55	2.0	20.0	0	118%	80	120	0	
1,3,5-Trimethylbenzene	22.84	1.0	20.0	0	114%	80	120	0	
tert-Butylbenzene	22.76	1.0	20.0	0	114%	80	120	0	
1,2,4-Trimethylbenzene	23.53	1.0	20.0	0	118%	80	120	0	
sec-Butylbenzene	24.85	1.0	20.0	0	124%	80	120	0	S
4-Isopropyltoluene	23.42	1.0	20.0	0	117%	80	120	0	
1,3-Dichlorobenzene	24.00	1.0	20.0	0	120%	80	120	0	S
1,4-Dichlorobenzene	24.56	1.0	20.0	0	123%	80	120	0	S
n-Butylbenzene	24.00	1.0	20.0	0	120%	80	120	0	
1,2-Dichlorobenzene	23.57	1.0	20.0	0	118%	80	120	0	
1,2-Dibromo-3-chloropropane (DBCP)	22.24	2.0	20.0	0	111%	80	120	0	
1,2,4-Trichlorobenzene	21.95	2.0	20.0	0	110%	80	120	0	
Hexachlorobutadiene	24.59	2.0	20.0	0	123%	80	120	0	S
Naphthalene	22.40	2.0	20.0	0	112%	80	120	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Laboratory Control Spike

1,2,3-Trichlorobenzene	23.29	2.0	20.0	0	116%	80	120	0	
1,2-Dichloroethane-d4	1.03	0.10	1.00	0	103%	80	120	0	
1,4-Dichlorobenzene-d4	1.22	0.10	1.00	0	122%	80	120	0	S
Dibromofluoromethane	1.06	0.10	1.00	0	106%	80	120	0	
Toluene-d8	0.939	0.10	1.00	0	93.9%	80	120	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-05200** Batch ID: **R34064** Test Code: **8260W** Units: **µg/L** Analysis Date: **3/26/05 3:27:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS2_050325A** SeqNo: **492955**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	19.54	1.0	20.0	0	97.7%	80	120	18.9	3.44%	20	
Chloromethane	23.95	2.0	20.0	0	120%	80	120	21.1	12.8%	20	
Vinyl chloride	26.56	1.0	20.0	0	133%	80	120	24.0	10.0%	20	S
Bromomethane	18.27	1.0	20.0	0	91.4%	80	120	14.4	23.4%	20	R
Chloroethane	27.86	1.0	20.0	0	139%	80	120	23.6	16.8%	20	S
Trichlorofluoromethane	24.14	1.0	20.0	0	121%	80	120	19.9	19.2%	20	S
1,1-Dichloroethene	26.45	1.0	20.0	0	132%	80	120	27.1	2.31%	20	S
Methylene chloride	27.61	2.0	20.0	0	138%	80	120	24.9	10.4%	20	S
trans-1,2-Dichloroethene	23.82	1.0	20.0	0	119%	80	120	23.4	1.71%	20	
Methyl tert-butyl ether (MTBE)	19.62	1.0	20.0	0	98.1%	80	120	21.1	7.25%	20	
Tert-butyl alcohol (TBA)	502.5	10	400	0	126%	80	120	569	12.5%	20	S
Di-isopropyl ether (DIPE)	19.89	1.0	20.0	0	99.4%	80	120	20.8	4.31%	20	
1,1-Dichloroethane	26.00	1.0	20.0	0	130%	80	120	24.0	7.67%	20	S
Ethyl tert-butyl ether (ETBE)	19.07	1.0	20.0	0	95.4%	80	120	20.6	7.48%	20	
cis-1,2-Dichloroethene	22.20	1.0	20.0	0	111%	80	120	21.5	3.12%	20	
2,2-Dichloropropane	20.01	1.0	20.0	0	100%	80	120	25.5	24.2%	20	R
Bromochloromethane	24.27	1.0	20.0	0	121%	80	120	22.4	7.92%	20	S
Chloroform	25.56	1.0	20.0	0	128%	80	120	23.0	10.5%	20	S
Carbon Tetrachloride	23.11	1.0	20.0	0	116%	80	120	22.5	2.84%	20	
1,1,1-Trichloroethane	23.55	1.0	20.0	0	118%	80	120	23.0	2.25%	20	
1,1-Dichloropropene	20.72	1.0	20.0	0	104%	80	120	20.7	0.301%	20	
Benzene	23.41	0.50	20.0	0	117%	80	120	21.8	7.14%	20	
Tert-amyl methyl ether (TAME)	16.96	1.0	20.0	0	84.8%	80	120	18.4	7.90%	20	
1,2-Dichlorcethane	24.30	1.0	20.0	0	122%	80	120	21.9	10.3%	20	S
Trichloroethene	22.13	1.0	20.0	0	111%	80	120	21.3	3.98%	20	
Dibromomethane	22.17	1.0	20.0	0	111%	80	120	21.2	4.37%	20	
1,2-Dichloropropane	23.45	1.0	20.0	0	117%	80	120	22.2	5.53%	20	
Bromodichloromethane	21.92	1.0	20.0	0	110%	80	120	20.2	8.21%	20	
cis-1,3-Dichloropropene	17.66	1.0	20.0	0	88.3%	80	120	20.1	13.0%	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Toluene	21.17	0.50	20.0	0	106%	80	120	20.5	3.29%	20	
Tetrachloroethene	21.72	1.0	20.0	0	109%	80	120	21.1	2.93%	20	
trans-1,3-Dichloropropene	18.43	1.0	20.0	0	92.1%	80	120	19.4	5.33%	20	
1,1,2-Trichlorcethane	24.01	1.0	20.0	0	120%	80	120	20.6	15.5%	20	S
Dibromochloromethane	20.38	1.0	20.0	0	102%	80	120	20.0	1.97%	20	
1,3-Dichloropropane	21.60	1.0	20.0	0	108%	80	120	20.8	3.93%	20	
1,2-Dibromoethane (EDB)	20.20	2.0	20.0	0	101%	80	120	19.2	4.91%	20	
Chlorobenzene	20.67	1.0	20.0	0	103%	80	120	20.1	2.79%	20	
Ethylbenzene	21.01	0.50	20.0	0	105%	80	120	19.6	6.94%	20	
1,1,1,2-Tetrachloroethane	20.28	1.0	20.0	0	101%	80	120	19.1	6.08%	20	
m,p-Xylene	49.29	0.50	40.0	0	123%	80	120	43.6	12.3%	20	S
o-Xylene	20.45	0.50	20.0	0	102%	80	120	20.8	1.70%	20	
Bromoform	20.65	1.0	20.0	0	103%	80	120	22.7	9.55%	20	
Styrene	20.58	1.0	20.0	0	103%	80	120	20.6	0.149%	20	
Isopropylbenzene	20.56	1.0	20.0	0	103%	80	120	21.0	2.13%	20	
Bromobenzene	20.35	1.0	20.0	0	102%	80	120	20.3	0.106%	20	
n-Propylbenzene	23.26	1.0	20.0	0	116%	80	120	22.9	1.42%	20	
1,1,2,2-Tetrachloroethane	24.20	1.0	20.0	0	121%	80	120	22.4	7.51%	20	S
2-Chlorotoluene	22.88	1.0	20.0	0	114%	80	120	22.2	3.14%	20	
4-Chlorotoluene	23.52	1.0	20.0	0	118%	80	120	22.9	2.49%	20	
1,2,3-Trichloropropane	23.49	2.0	20.0	0	117%	80	120	23.6	0.279%	20	
1,3,5-Trimethylbenzene	22.73	1.0	20.0	0	114%	80	120	22.8	0.468%	20	
tert-Butylbenzene	22.52	1.0	20.0	0	113%	80	120	22.8	1.08%	20	
1,2,4-Trimethylbenzene	23.44	1.0	20.0	0	117%	80	120	23.5	0.375%	20	
sec-Butylbenzene	24.96	1.0	20.0	0	125%	80	120	24.8	0.431%	20	S
4-Isopropyltoluene	22.81	1.0	20.0	0	114%	80	120	23.4	2.66%	20	
1,3-Dichlorobenzene	23.83	1.0	20.0	0	119%	80	120	24.0	0.716%	20	
1,4-Dichlorobenzene	25.69	1.0	20.0	0	128%	80	120	24.6	4.52%	20	S
n-Butylbenzene	23.77	1.0	20.0	0	119%	80	120	24.0	0.958%	20	
1,2-Dichlorobenzene	23.39	1.0	20.0	0	117%	80	120	23.6	0.770%	20	
1,2-Dibromo-3-chloropropane (DBCP)	23.61	2.0	20.0	0	118%	80	120	22.2	6.00%	20	
1,2,4-Trichlorobenzene	21.23	2.0	20.0	0	106%	80	120	22.0	3.33%	20	
Hexachlorobutadiene	24.45	2.0	20.0	0	122%	80	120	24.6	0.562%	20	S
Naphthalene	20.74	2.0	20.0	0	104%	80	120	22.4	7.72%	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

1,2,3-Trichlorobenzene	23.01	2.0	20.0	0	115%	80	120	23.3	1.22%	20	
1,2-Dichloroethane-d4	1.15	0.10	1.00	0	115%	80	120	1.03	11.0%	20	
1,4-Dichlorobenzene-d4	1.24	0.10	1.00	0	124%	80	120	1.22	2.27%	20	S
Dibromofluoromethane	1.15	0.10	1.00	0	115%	80	120	1.06	7.46%	20	
Toluene-d8	0.963	0.10	1.00	0	96.3%	80	120	0.939	2.61%	20	

Sample ID: **LCS** Batch ID: **R34132** Test Code: **AMMW** Units: **mg/L** Analysis Date: **3/30/05** Prep Date:
Client ID: Run ID: **WC_050330H** SeqNo: **493933**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	5.090	0.20	5.00	0	102%	92	110	0			

Sample ID: **LCSD** Batch ID: **R34132** Test Code: **AMMW** Units: **mg/L** Analysis Date: **3/30/05** Prep Date:
Client ID: Run ID: **WC_050330H** SeqNo: **493934**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ammonia Nitrogen	5.090	0.20	5.00	0	102%	92	110	5.09	0%	10	

Sample ID: **LCS-13219A** Batch ID: **13219** Test Code: **AS200.9X** Units: **µg/L** Analysis Date: **4/6/05 4:01:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INAA2_050407A** SeqNo: **496546**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.14	10	20.0	0	95.7%	85	115	0			

Sample ID: **LCS** Batch ID: **R34124** Test Code: **CODW** Units: **mg/L** Analysis Date: **3/30/05** Prep Date: **3/30/05**
Client ID: Run ID: **WC_050330E** SeqNo: **493803**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chemical Oxygen Demand	50.03	5.0	50.0	0	100%	85	117	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD** Batch ID: **R34124** Test Code: **CODW** Units: **mg/L** Analysis Date: **3/30/05** Prep Date: **3/30/05**
Client ID: Run ID: **WC_050330E** SeqNo: **493804**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chemical Oxygen Demand	52.23	5.0	50.0	0	104%	85	117	50.0	4.31%	10	

Sample ID: **LCS-05201** Batch ID: **R34070** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **3/25/05 5:59:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS2_050325B** SeqNo: **493012**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	1,109	50	1,000	0	111%	80	120	0			

Sample ID: **LCSD-05201** Batch ID: **R34070** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **3/25/05 6:29:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS2_050325B** SeqNo: **493013**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	1,011	50	1,000	0	101%	80	120	1,110	9.21%	20	

Sample ID: **LCS-05221** Batch ID: **R34188** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **4/1/05 4:50:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS2_050401B** SeqNo: **494577**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	1,019	50	1,000	0	102%	80	120	0			

Sample ID: **LCSD-05221** Batch ID: **R34188** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **4/1/05 5:20:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS2_050401B** SeqNo: **494578**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	928.7	50	1,000	0	92.9%	80	120	1,020	9.26%	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: LCS 03250504 Batch ID: R34069 Test Code: ICIONW Units: mg/L Analysis Date: 3/25/05 3:14:46 PM Prep Date:
Client ID: Run ID: INIC2_050325B SeqNo: 493003

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	10.23	0.50	10.0	0	102%	90	110	0			

Sample ID: LCS 03250504 Batch ID: R34067 Test Code: ICNOW Units: mg/L Analysis Date: 3/25/05 3:14:46 PM Prep Date:
Client ID: Run ID: INIC2_050325A SeqNo: 492985

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as Nitrogen)	1.016	0.10	1.00	0	102%	90	110	0			
Nitrite (as Nitrogen)	0.9940	0.10	1.00	0	99.4%	90	110	0			

Sample ID: LCS-13219P Batch ID: 13219 Test Code: ICPX Units: µg/L Analysis Date: 4/5/05 3:42:00 PM Prep Date: 3/24/05
Client ID: Run ID: INICP1_050405B SeqNo: 496110

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	507.4	50	500	0	101%	85	115	0			
Barium	477.1	5.0	500	0	95.4%	85	115	0			
Beryllium	495.6	1.0	500	0.460	99.0%	85	115	0			
Cadmium	529.0	10	500	2.24	105%	85	115	0			
Chromium	495.6	10	500	2.29	98.7%	85	115	0			
Cobalt	507.0	10	500	2.03	101%	85	115	0			
Copper	478.6	10	500	0	95.7%	85	115	0			
Iron	503.4	100	500	0	101%	85	115	0			
Manganese	492.6	2.0	500	0	98.5%	85	115	0			
Molybdenum	503.3	20	500	6.13	99.4%	85	115	0			
Nickel	516.1	20	500	0	103%	85	115	0			
Silver	46.15	10	50.0	0	92.3%	85	115	0			
Vanadium	494.9	10	500	2.45	98.5%	85	115	0			
Zinc	549.0	20	500	6.90	108%	85	115	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-13219P** Batch ID: **13219** Test Code: **ICPX** Units: **µg/L** Analysis Date: **4/8/05 3:08:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INICP1_050408A** SeqNo: **497259**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	498.6	50	500	0	99.7%	85	115	0			
Barium	472.5	5.0	500	0	94.5%	85	115	0			
Beryllium	468.4	1.0	500	0	93.7%	85	115	0			
Cadmium	520.3	10	500	0	104%	85	115	0			
Chromium	498.8	10	500	0	99.8%	85	115	0			
Cobalt	497.5	10	500	0	99.5%	85	115	0			
Copper	473.3	10	500	0	94.7%	85	115	0			
Iron	474.6	100	500	0	94.9%	85	115	0			
Manganese	454.9	2.0	500	0	91.0%	85	115	0			
Molybdenum	496.6	20	500	0	99.3%	85	115	0			
Nickel	474.7	20	500	0	94.9%	85	115	0			
Vanadium	491.6	10	500	0	98.3%	85	115	0			
Zinc	535.6	20	500	0	107%	85	115	0			

Sample ID: **LCS-13223** Batch ID: **13223** Test Code: **MERCW** Units: **µg/L** Analysis Date: **3/30/05** Prep Date: **3/25/05**
Client ID: Run ID: **CVAA1_050330A** SeqNo: **493830**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	5.100	1.0	5.00	0	102%	85	115	0			

Sample ID: **LCSD-13223** Batch ID: **13223** Test Code: **MERCW** Units: **µg/L** Analysis Date: **3/30/05** Prep Date: **3/25/05**
Client ID: Run ID: **CVAA1_050330A** SeqNo: **493831**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	5.120	1.0	5.00	0	102%	85	115	5.10	0.391%	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Laboratory Control Spike

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: LCS 4-7-05 Batch ID: **R34338** Test Code: **NKJEW** Units: **mg/L** Analysis Date: **4/12/05** Prep Date: **4/7/05**											
Client ID: Run ID: **WC_050412D** SeqNo: **497770**											
Nitrogen- Total Kjeldahl	10.40	1.0	10.0	0	104%	73	113	0			
Sample ID: LCS 4-11-05 Batch ID: **R34338** Test Code: **NKJEW** Units: **mg/L** Analysis Date: **4/12/05** Prep Date: **4/11/05**											
Client ID: Run ID: **WC_050412D** SeqNo: **497774**											
Nitrogen- Total Kjeldahl	10.80	1.0	10.0	0	108%	73	113	0			
Sample ID: LCS-13219A Batch ID: **13219** Test Code: **PB200.9X** Units: **µg/L** Analysis Date: **3/25/05 5:48:00 PM** Prep Date: **3/24/05**											
Client ID: Run ID: **INAA2_050325A** SeqNo: **492795**											
Lead	38.98	10	40.0	0	97.4%	85	115	0			
Sample ID: LCS Batch ID: **R34207** Test Code: **PO4TOW** Units: **mg/L** Analysis Date: **4/5/05** Prep Date: **4/5/05**											
Client ID: Run ID: **WC_050405C** SeqNo: **494813**											
Total Phosphate Phosphorus	0.5208	0.020	0.500	0	104%	90	110	0			
Sample ID: LCSD Batch ID: **R34207** Test Code: **PO4TOW** Units: **mg/L** Analysis Date: **4/5/05** Prep Date: **4/5/05**											
Client ID: Run ID: **WC_050405C** SeqNo: **494814**											
Total Phosphate Phosphorus	0.5124	0.020	0.500	0	102%	90	110	0.521	1.62%	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: **LCS-13219A** Batch ID: **13219** Test Code: **SE200.9X** Units: **µg/L** Analysis Date: **3/28/05 6:44:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INAA2_050328A** SeqNo: **493199**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	19.13	10	20.0	0	95.6%	85	115	0			

Sample ID: **LCS-13219A** Batch ID: **13219** Test Code: **TL200.9X** Units: **µg/L** Analysis Date: **4/4/05 2:59:00 PM** Prep Date: **3/24/05**
Client ID: Run ID: **INAA2_050404B** SeqNo: **494705**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	20.07	10	20.0	0	100%	85	115	0			

Sample ID: **LCS-13268** Batch ID: **13268** Test Code: **TPHDIW** Units: **µg/L** Analysis Date: **4/5/05 12:41:36 PM** Prep Date: **4/4/05**
Client ID: Run ID: **ORGC7_050405A** SeqNo: **496431**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	562.2	50	500	0	112%	67	120	0			
N-Tricosane	54.5	0.10	50.0	0	109%	70	130	0			

Sample ID: **LCSD-13268** Batch ID: **13268** Test Code: **TPHDIW** Units: **µg/L** Analysis Date: **4/5/05 1:00:15 PM** Prep Date: **4/4/05**
Client ID: Run ID: **ORGC7_050405A** SeqNo: **496432**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	579.2	50	500	0	116%	67	120	562	2.97%	15	
N-Tricosane	53.2	0.10	50.0	0	106%	70	130	54.5	2.46%	15	

Sample ID: **LCS-13230** Batch ID: **13230** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **3/29/05 10:10:09 AM** Prep Date: **3/28/05**
Client ID: Run ID: **ORGC7_050329A** SeqNo: **494632**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	541.8	50	500	0	108%	81	156	0			
TPHC Motor Oil	1,212	170	1,000	0	121%	90	144	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pacific Lumber-M
Work Order: 0503534
Project: 089097.120, PALCO Company Garage

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-13230** Batch ID: **13230** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **3/29/05 10:28:39 AM** Prep Date: **3/28/05**

Client ID: Run ID: **ORGC7_050329A** SeqNo: **494633**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	576.2	50	500	0	115%	81	156	542	6.14%	15	
TPHC Motor Oil	1,170	170	1,000	0	117%	90	144	1,210	3.52%	15	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER: 0503534

Attention: Bob Vogt
Results & Invoice to: PALCO
Address: P.O. Box 37
Scotia, CA
Phone: 764-4268
Copies of Report to: SHN Martin E. Lay
812 W. Wabash Ave. Eureka, CA 95501-2138
Sampler (Sign & Print): [redacted] David R. Paine

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☒ STD (2–3 Wk) ☐ Other: _____
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☐ Verbal ☐ By: __/__/__
Final Report: FAX ☐ Verbal ☐ By: __/__/__

PROJECT INFORMATION
Project Number: 089097.120
Project Name: PALCO Company Garage
Purchase Order Number: ~~M-57594~~ M7007

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	CONTAINER	PRESERVATIVE	ANALYSIS: 8260 list 1	TPHD	8260 list 7	Dissolved Methane	COD and Ammonia	Nitrogen + TPO4	TDS, NO3, SO4, Alk	Diss. Cam 17 metals	Mn and Fe	TPHD / MO
	MW-6	3/23/05	1120	GW	9	b	X	X								
	MW-2		1245		14	b	X	X								
	MW-5		1400		9	b	X	X								
	MW-1		1410		9	b	X	X								
	MW-3		1600		6	c	X	X								
	MW-4		1620		6	c	X	X								
	MW-7	~~3/24/05~~ 3/23/05	0820		3				X	X	X	X	X	X	X	X
					3											
					14											

SAMPLE CONDITION/SPECIAL INSTRUCTIONS
Global ID #
T060 2300204
EDF
Cooler temp = 12.3°C

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
David R. Paine David R. Paine	~~3/24/05~~ 3/24/05	D. Thompson	3/24/05 0925

SAMPLE DISPOSAL
☒ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus (Hand)

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Appendix D

Historic Monitoring Data

Table D-1
Historic Groundwater Elevation Data
PALCO Company Garage, Scotia, California

Well Number	Date of Reading	Measurement Point Elevation (feet[1])	Depth to Groundwater (feet)	Groundwater Surface Elevation (feet)
MW-1	12/22/1999	142.64	3.50	139.14
	1/28/2000		3.34	139.30
	2/25/2000		3.21	139.43
	3/22/2000		3.42	139.22
	4/24/2000		3.43	139.21
	5/26/2000		3.51	139.13
	6/23/2000		3.58	139.06
	7/21/2000		3.63	139.01
	8/24/2000		3.57	139.07
	9/28/2000		3.60	139.04
	10/24/2000		4.02	138.62
	11/27/2000		3.66	138.98
	12/29/2000		3.64	139.00
	1/25/2001		3.31	139.33
	2/26/2001		3.18	139.46
	3/26/2001		3.53	139.11
	4/27/2001		3.52	139.12
	5/25/2001		3.52	139.12
	7/2/2001		3.54	139.06
	7/26/2001		3.55	139.09
	8/27/2001		3.59	139.05
	9/26/2001		3.65	138.99
	10/26/2001		3.80	138.84
	11/26/2001		3.31	139.33
	12/27/2001		3.27	139.37
	1/28/2002		3.49	139.15
	2/22/2002		3.39	139.25
	3/29/2002		3.48	139.16
	4/26/2002		3.68	138.96
	5/28/2002		3.56	139.08
	6/26/2002		3.56	139.08
	3/27/2003		3.31	139.33
	3/25/2004		3.48	139.16
	3/23/2005		2.97	139.67

Table D-1
Historic Groundwater Elevation Data
PALCO Company Garage, Scotia, California

Well Number	Date of Reading	Measurement Point Elevation (feet[1])	Depth to Groundwater (feet)	Groundwater Surface Elevation (feet)
MW-2	12/22/1999	137.66	5.51	132.15
	1/28/2000		5.45	132.21
	2/25/2000		5.37	132.29
	3/22/2000		5.72	131.94
	4/24/2000		5.73	131.93
	5/26/2000		5.89	131.77
	6/23/2000		6.16	131.50
	7/21/2000		6.20	131.46
	8/24/2000		6.22	131.44
	9/28/2000		6.26	131.40
	10/24/2000		6.17	131.49
	11/27/2000		6.04	131.62
	12/29/2000		5.81	131.85
	1/25/2001		5.13	132.53
	2/26/2001		5.28	132.38
	3/26/2001		5.61	132.05
	4/27/2001		5.80	131.86
	5/25/2001		6.06	131.60
	7/2/2001		6.02	131.64
	7/26/2001		6.16	131.50
	8/27/2001		6.25	131.41
	9/26/2001		6.26	131.40
	10/26/2001		6.29	131.37
	11/26/2001		5.30	132.36
	12/27/2001		5.51	132.15
	1/28/2002		5.55	132.11
	2/22/2002		5.47	132.19
	3/29/2002		5.62	132.04
	4/26/2002		5.84	131.82
	5/28/2002		5.87	131.79
	6/26/2002		6.10	131.56
	3/27/2003		5.20	132.46
	3/25/2004		5.75	131.91
	3/23/2005		4.96	132.70

Table D-1
Historic Groundwater Elevation Data
PALCO Company Garage, Scotia, California

Well Number	Date of Reading	Measurement Point Elevation (feet[1])	Depth to Groundwater (feet)	Groundwater Surface Elevation (feet)
MW-3	12/22/1999	138.29	5.31	132.98
	1/28/2000		5.12	133.17
	2/25/2000		5.06	133.23
	3/22/2000		5.33	132.96
	4/24/2000		5.24	133.05
	5/26/2000		5.24	133.05
	6/23/2000		5.31	132.98
	7/21/2000		5.37	132.92
	8/24/2000		5.35	132.94
	9/28/2000		5.39	132.90
	10/24/2000		5.37	132.92
	11/27/2000		5.44	132.85
	12/29/2000		5.44	132.85
	1/25/2001		4.79	133.50
	2/26/2001		5.02	133.27
	3/26/2001		5.38	132.91
	4/27/2001		5.35	132.94
	5/25/2001		5.42	132.87
	7/2/2001		5.34	132.95
	7/26/2001		5.47	132.82
	8/27/2001		5.45	132.84
	9/26/2001		5.49	132.80
	10/26/2001		5.48	132.81
	11/26/2001		5.08	133.21
	12/27/2001		5.24	133.05
	1/28/2002		5.23	133.06
	2/22/2002		5.11	133.18
	3/29/2002		5.24	133.05
	4/26/2002		5.21	133.08
	5/28/2002		5.21	133.08
	6/26/2002		5.27	133.02
	3/27/2003		4.87	133.42
	3/25/2004		5.00	133.29
	3/23/2005		4.63	133.66

Table D-1
Historic Groundwater Elevation Data
PALCO Company Garage, Scotia, California

Well Number	Date of Reading	Measurement Point Elevation (feet[1])	Depth to Groundwater (feet)	Groundwater Surface Elevation (feet)
MW-4	11/27/2000	139.74	5.23	134.51
	12/29/2000		5.07	134.67
	1/25/2001		4.73	135.01
	2/26/2001		4.55	135.19
	3/26/2001		4.95	134.79
	4/27/2001		4.78	134.96
	5/25/2001		5.21	134.53
	7/2/2001		5.03	134.71
	7/26/2001		5.22	134.52
	8/27/2001		5.20	134.54
	9/26/2001		5.22	134.52
	10/26/2001		5.24	134.50
	11/26/2001		4.83	134.91
	12/27/2001		4.64	135.10
	1/28/2002		4.90	134.84
	2/22/2002		4.73	135.01
	3/29/2002		4.89	134.85
	4/26/2002		4.97	134.77
	5/28/2002		4.86	134.88
	6/26/2002		5.02	134.72
	3/27/2003		4.51	135.23
	3/25/2004		4.85	134.89
	3/23/2005		4.37	135.37

Table D-1
Historic Groundwater Elevation Data
PALCO Company Garage, Scotia, California

Well Number	Date of Reading	Measurement Point Elevation (feet[1])	Depth to Groundwater (feet)	Groundwater Surface Elevation (feet)
MW-5	3/25/2004	136.00	4.35	131.65
	3/23/2005		3.92	132.08
MW-6	3/25/2004	146.95	5.09	141.86
	3/23/2005		4.87	142.08
MW-7	3/23/2005	140.89	6.23	134.66
Pond Surface Elevation	4/27/2001	134.49	2.27	132.22
	5/25/2001		2.28	132.21
	7/26/2001		2.37	132.12
	8/27/2001		2.37	132.12
	9/26/2001		2.34	132.15
	10/26/2001		2.36	132.13
	11/26/2001		2.24	132.25
	12/27/2001		2.30	132.19
	1/28/2002		2.29	132.20
	2/22/2002		2.27	132.22
	3/26/2002		2.30	132.19
	3/29/2002		2.33	132.16
	4/26/2002		2.34	132.15
	5/28/2002		2.32	132.17
	6/26/2002		2.33	132.16
	3/27/2003		2.21	132.28
	3/25/2004		2.42	132.07
	3/23/2005		2.32	132.17

1. Elevation Datum NAVD88 (North American Vertical Datum 1988)

Table D-2
Historic Groundwater Analytical Results
PALCO Company Garage, Scotia, California
(in ug/L[1])

Sample Location	Date	TPHMO[2]	TPHD[2]	TPHG[3]	B[4]	T[4]	E[4]	X[4]	MTBE[5]	DIPE[5]	ETBE[5]	TAME[5]	TBA[5]	Methanol[5]	Ethanol[5]	Pb[6]
MW-1	12/23/99	NA[7]	200	1,700	27	6.3	58	7.6	1.1	<0.50[8]	<0.50	<0.50	<5.0	<5.0	<5.0	<5.0
	03/22/00	NA	140	4,200	92	49	130	14	<100	NA	NA	NA	NA	NA	NA	NA
	06/23/00	NA	73	1,200	8.7	2.4	19	3.2	<1.0	<0.50	<0.50	<0.50	<5.0	<5.0	<5.0	<20
	09/28/00	NA	<50	840	5.5	1.3	5.1	1.9	<0.50	<0.50	<0.50	<0.50	<5.0	<100	<5.0	<20
	12/29/00	NA	<50	960	8.9	1.9	11	2.7	0.53	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<20
	03/26/01	NA	87	1,100	10	2.2	13	2.9	0.51	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<20
	07/02/01	NA	57	850	4.7	1.3	3.2	1.7	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<20
	09/26/01	NA	75	860	6.3	1.5	3.4	1.9	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<20
	12/27/01	NA	65	1,700	17	3.4	13	3.0	1.1	<1.0	<1.0	<1.0	<5.0	<50	<5.0	<20
	03/29/02	NA	<50	1,400	16	2.9	10	2.6	0.78	<1.0	<1.0	<1.0	<5.0	<50	<5.0	<10
	06/26/02	NA	99	1,400	10	2.7	6.3	3.46	0.52	<1.0	<1.0	<1.0	<5.0	<50	<5.0	<10
	03/27/03	NA	170	3,500	32	4.1	18	5.04	0.80	<1.0	<1.0	<1.0	<10	<50	<5.0	<10
	03/25/04	<170	210	2,300	10	3.4	6.3	4.2	<1.0	<1.0	<1.0	<1.0	<20	NA	NA	<10
	03/23/05	NA	540	3,700	13	4.8	13	6.6	<1.0	<1.0	<1.0	<1.0	<10	NA	NA	NA
MW-2	12/23/99	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<5.0
	03/22/00	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<3.0	NA	NA	NA	NA	NA	NA	NA
	06/23/00	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	NA
	09/28/00	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<20
	12/29/01	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<20
	03/26/01	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<20
	07/02/01	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<20
	09/26/01	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<20
	12/27/01	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<5.0	<50	<5.0	<20
	03/29/02	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<10
	06/26/02	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<5.0	<50	<5.0	<10
	03/27/03	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<5.0	<50	<5.0	<10
	03/25/04	<170	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<20	NA	NA	<10
	03/23/05	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	NA	NA	<10

Table D-2
Historic Groundwater Analytical Results
PALCO Company Garage, Scotia, California
(in ug/L[1])

Sample Location	Date	TPHMO[2]	TPHD[2]	TPHG[3]	B[4]	T[4]	E[4]	X[4]	MTBE[5]	DIPE[5]	ETBE[5]	TAME[5]	TBA[5]	Methanol[5]	Ethanol[5]	Pb[6]
MW-3	12/23/99	NA	910	4,400	100	18	61	34.9	<0.50	<0.50	<0.50	<0.50	5.9	<50	<20	<5.0
	03/22/00	NA	190	6,500	320	87	91	69	<200	NA	NA	NA	NA	NA	NA	NA
	06/23/00	NA	230	4,200	100	15	39	31	<1.0	<0.50	<0.50	<0.50	5.6	<50	<50	<20
	09/28/00	NA	140	6,300	160	20	30	40	<0.50	<0.50	<0.50	<0.50	7.6	<5.0	<5.0	<20
	12/29/01	NA	120	4,400	97	13	43	27	<0.50	<0.50	<0.50	<0.50	7.4	<50	<5.0	<20
	03/26/01	NA	310	5,000	120	18	44	33	<1.0	<1.0	<1.0	<1.0	<10	<100	<10	<20
	07/02/01	NA	220	4,800	120	17	21	29	<1.0	<1.0	<1.0	<1.0	<10	<100	<10	<20
	09/26/01	NA	160	5,000	130	17	22	32	<1.0	<1.0	<1.0	<1.0	<10	<100	<10	<20
	12/27/01	NA	210	6,700	180	20	60	32.7	0.95	<1.0	<1.0	<1.0	14	<50	<5.0	<20
	03/29/02	NA	300	4,800	150	20	37	27.4	<1.0	<2.0	<2.0	<2.0	<20	<50	<5.0	<10
	06/26/02	NA	460	5,400	140	28	35	46.9	<1.0	<2.0	<2.0	<2.0	<20	<50	<5.0	<10
	03/27/03	NA	210	5,100	110	16	34	22.2	<1.0	<2.0	<2.0	<2.0	<20	<50	<5.0	<10
	03/25/04	230	230	4,400	47	14	33	20.8	<4.0	<1.0	<1.0	<1.0	<20	NA	NA	<10
	03/23/05	NA	550	4,600	78	15	31	19.6	<10	<10	<10	<10	<10	NA	NA	NA
MW-4	11/14/00	NA	290	6,500	450	44	130	110	7.6	<2.0	<2.0	<2.0	27	<200	<20	<20
	12/29/01	NA	150	8,200	640	53	190	100	6.0	<1.0	<1.0	<1.0	23	<100	<10	<20
	03/26/01	NA	230	11,000	760	75	240	120	5.3	<2.0	<2.0	<2.0	28	<200	<20	<20
	07/02/01	NA	220	9,700	740	72	180	110	5.9	<5.0	<5.0	<5.0	<50	<500	<50	<20
	09/26/01	NA	210	8,700	710	63	160	100	5.3	<2.5	<2.5	<2.5	<25	<250	<25	<20
	12/27/01	NA	240	11,000	920	57	160	78	9.6	<5.0	<5.0	<5.0	<50	<50	<5.0	<20
	03/29/02	NA	330	9,000	860	68	160	77	5.4	<10	<10	<10	<100	<50	<5.0	<10
	06/26/02	NA	560	10,000	690	69	160	101	5.9	<5.0	<5.0	<5.0	<50	<50	<5.0	<10
	03/27/03	NA	360	13,000	960	78	200	98	<5.0	<10	<10	<10	<100	<50	<5.0	<10
	03/25/04	<170	360	12,000	820	70	120	71	<3.5	<1.0	<1.0	<1.0	<20	NA	NA	<10
	03/23/05	NA	900	13,000	1,100	73	150	73	<8.0	<1.0	<1.0	<1.0	<32	NA	NA	NA
MW-5	03/25/04	<170	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<20	NA	NA	<10
	03/23/05	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	NA	NA	NA
MW-6	03/25/04	<170	64	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<20	NA	NA	<10
	03/23/05	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<10	NA	NA	NA
MW-7	03/24/05	<170	200	1,500	3.5	2.6	2.0	3.23	<1.0	<1.0	<1.0	<1.0	<10	NA	NA	<10

1. ug/L: micrograms per Liter
2. Total Petroleum Hydrocarbons as Motor Oil (TPHMO) and as Diesel (TPHD) analyzed in general accordance with EPA Method No. 8015B.
3. Total Petroleum Hydrocarbons as Gasoline (TPHG) analyzed in general accordance with EPA Method No. 8260B.
4. Benzene (B), Toluene (T), Ethylbenzene (E), and total Xylenes (X) analyzed in general accordance with EPA Method No. 8260B.
5. Methyl Tertiary-Butyl Ether (MTBE), Diisopropyl Ether (DIPE), Ethyl Tertiary-Butyl Ether (ETBE), Tertiary-Amyl Methyl Ether (TAME), Tertiary-Butyl Alcohol (TBA), Methanol, and Ethanol analyzed in general accordance with EPA Method No. 8260B.
6. Pb: Lead analyzed in general accordance with EPA Method No. 200.9.
7. NA: Not Analyzed
8. <: Denotes a value that is "less than" the method detection limit.

Table D-3
Historical Volatile Organic Compound Analysis[1]
PALCO Company Garage, Scotia, California
(in ug/L)[2]

Sample Location	Date	2,2-Dichloro-propane	Isopropyl-benzene	n-Propyl-benzene	1,3,5-Trimethyl-benzene	tert-Butyl-benzene	1,2,4-Trimethyl-benzene	Sec-Butyl-benzene	4-Isopropyl-toluene	n-Butyl-benzene	Naphthalene
MW-1	12/23/99	NA[3]	16	35	4.7	2.0	<0.50[4]	2.4	0.66	12	11
	03/25/04	2.3	28	60	<1.0	4.6	<1.0	4.9	2.2	7.3	3.1
MW-2	12/23/99	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	03/25/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
MW-3	12/23/99	NA	70	120	15	8.1	2.8	6.1	2.0	19	16
	03/25/04	6.4	75	120	4.2	11	4.1	8.5	4.5	11	8.5
MW-4	03/25/04	17	110	170	14	8.2	2.3	9.1	7.0	13	23
MW-5	03/25/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
MW-6	03/25/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
MW-7	03/24/05	<5.0	7.9	16	<1.0	7.9	<1.0	<4.0	<1.0	2.9	<2.0

1. Only compounds that were detected in site groundwater are shown.
2. ug/L: micrograms per Liter.
3. NA: Not Analyzed.
4. <: Denotes a value that is "less than" the method detection limit.

Table D-4
Historic Geochemical Parameters
PALCO Company Garage, Scotia, California

Sample Location	Sample Date	DO[1] (ppm)[2]	DCO_2[3] (ppm)	ORP[4] (mV)[5]
MW-1	03/26/01	1.04	150	54
	07/02/01	0.18	225	26
	09/26/01	0.14	200	179
	12/27/01	0.52	140	138
	03/29/02	0.16	180	102
	06/26/02	0.27	200	119
	03/27/03	1.75	190	227
	03/25/04	0.93	175	261
	03/23/05	0.68	170	-83
MW-2	03/26/01	0.80	140	98
	07/02/01	0.10	200	13
	09/26/01	0.10	140	158
	12/27/01	0.27	100	154
	03/29/02	0.67	120	98
	06/26/02	0.22	120	166
	03/27/03	0.41	100	214
	03/25/04	0.60	180	276
	03/23/05	0.70	160	-48
MW-3	03/26/01	0.97	200	0
	07/02/01	0.13	400	-10
	09/26/01	0.38	220	17
	12/27/01	0.26	200	75
	03/29/02	0.29	170	46
	06/26/02	0.61	230	50
	03/27/03	1.06	80	194
	03/25/04	0.89	250	168
	03/23/05	0.91	90	-90
MW-4	03/26/01	0.85	350	14
	07/02/01	0.08	460	11
	09/26/01	0.10	460	-0.12
	12/27/01	0.30	250	100
	03/29/02	0.46	330	45
	06/26/02	0.24	300	118
	03/27/03	0.30	300	179
	03/25/04	0.53	350	118
	03/23/05	0.66	350	-111
MW-5	03/25/04	0.65	170	263
	03/23/05	1.76	50	13
MW-6	03/25/04	2.16	90	285
	03/23/05	0.72	70	108
MW-7	03/23/05	0.72	50	-62

1. DCO_2: Dissolved Carbon Dioxide, field measured using a field test kit.
2. DO: Dissolved Oxygen, field measured using portable instrumentation.
3. ppm: parts per million
4. ORP: Oxidation-Reduction Potential (Eh) measured using portable instrumentation.
5. mV: millivolts.

Table D-5
Historic CAM 17 Metals in Groundwater
PALCO Company Garage, Scotia, California
(in ug/L)[1]

Sample Location	Date	As[2]	Sb[2]	Ba[2]	Be[2]	Cd[2]	Cr[2]	Co[2]	Cu[2]	Fe[2]	Mn[2]	Mo[2]	Ni[2]	Ag[2]	V[2]	Zn[2]	Pb[2]	Hg[2]	Se[2]	Tl[2]
MW-1	03/25/04	16	<50[3]	43	<1.0	<10	<10	<10	<10	17,000	2,600	<20	<20	<10	<10	<20	<10	<1.0	<10	<10
MW-2	03/25/04	<10	<50	27	<1.0	<10	<10	<10	<10	6,900	1,500	<20	<20	<10	<10	<20	<10	<1.0	<10	<10
MW-3	03/25/04	20	<50	6.4	<1.0	<10	<10	<10	<10	14,000	2,000	<20	<20	<10	<10	<20	<10	<1.0	<10	<10
MW-4	03/25/04	19	<50	31	<1.0	<10	<10	<10	<10	38,000	5,700	<20	<20	<10	<10	<20	<10	<1.0	<10	<10
MW-5	03/25/04	19	<50	17	<1.0	<10	<10	<10	<10	7,000	3,200	<20	<20	<10	<10	<20	<10	<1.0	<10	<10
MW-6	03/25/04	<10	<50	6.2	<1.0	<10	<10	<10	<10	<100	250	<20	<20	<10	<10	<20	<10	<1.0	<10	<10
MW-7	03/24/05	40	<50	14	<1.0	<10	<10	<10	<10	7,600	3,500	30	<20	<10	<10	<20	<10	<1.0	<10	<10

1. ug/L: micrograms per Liter
2. As: Arsenic, Sb: Antimony, Ba: Barium, Be: Beryllium, Cd: Cadmium, Cr: Chromium, Co; Cobalt, Cu: Copper, Fe: Iron, Mn: Manganese, Mo: Molybdenum, Ni: Nickel, Ag: Silver, V: Vanadium, Zn: Zinc, Pb: Lead, Hg: Mercury, Se: Selenium, Tl: Thallium
3. <: Denotes a value that is "less than" the method detection limit.

Table D-6
Additional Groundwater Analytical Parameters, March 25, 2004
PALCO Company Garage, Scotia, California

Sample Location	Date	Ammonia Nitrogen (mg/L)[1]	Chemical Oxygen Demand (mg/L)	Total Phosphate Phosphorous (mg/L)	Alkalinity (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Dissolved Methane (ug/ml)[2]	Nitrogen Total Kjeldahl	Total Nitrogen
MW-1	03/25/04	1.5	39	0.69	270	<0.10[3]	3	360	3.1	NA[4]	NA
MW-2	03/25/04	3	45	1.5	190	<0.10	22	260	0.076	NA	NA
MW-3	03/25/04	1.5	91	4	250	<0.10	1.9	310	8	NA	NA
MW-4	03/25/04	1.9	170	2	600	<0.10	<0.50	680	18	NA	NA
MW-5	03/25/04	1.7	100	1.9	390	<0.10	11	500	<0.010	NA	NA
MW-6	03/25/04	<0.20	32	0.62	88	<0.10	11	140	0.01	NA	NA
MW-7	03/24/05	1.5	140	2.4	400	<0.10[3]	2.1	510	2.7	3.6	3.6

1. mg/L: milligrams per Liter
2. ug/ml: micrograms per milliliter
3. <: Denotes a value that is "less than" the method detection limit.
4. NA: Not Analyzed